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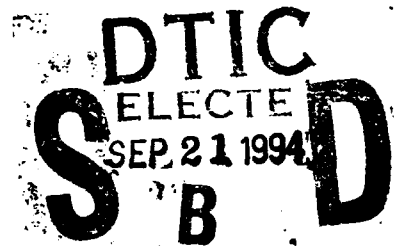
Construction Engineering  
Research Laboratories



# Environmental Compliance Assessment System (ECAS)

*Connecticut Supplement*

**U.S. Army**



In response to the growing number of environmental laws and regulations worldwide, the U.S. Army has adopted an environmental compliance program that identifies compliance problems before they are cited as violations by the U.S. Environmental Protection Agency (USEPA).

Beginning in 1985, Major Army Commands (MACOMs) were required to conduct comprehensive environmental assessments at all installations on a 4-year cycle. The installations must also conduct a mid-cycle internal assessment. Because each MACOM was developing a separate assessment system, the Army mandated, through Army Regulation 200-1, one unified Army-wide assessment mechanism. The resulting system combines Federal, Department of Defense (DOD), and Army environmental regulations, along with good management practices and risk management information, into a series of checklists that show (1) legal requirements and (2) which specific items or operations to review. Each assessment protocol lists a point of contact to help assessors review the checklist items as effectively as possible. The Environmental Compliance Assessment System (ECAS) manual incorporates existing checklists from USEPA and private industry.

The Connecticut Supplement was developed to be used in conjunction with the U.S. ECAS manual, using existing Connecticut state environmental legislation and regulations as well as suggested management practices.

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## FOREWORD

This work was performed for the U.S. Army Environmental Center (USAEC), under Military Inter-departmental Purchase Request number 1223, *Environmental Compliance Assessment System (ECAS)*, dated 5 August 1993. The USAEC technical monitor was Curt Williams, SFIM-AEC-ECC.

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## NOTICE

This manual is intended as a general guidance for personnel at certain United States Army installations. It is not, nor is it intended to be, a complete treatise on environmental laws and regulations. Neither the U.S. Government nor any agency thereof, nor any of their employees, makes any warranty, expressed or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information contained herein. For any specific questions about, or interpretations of, the legal references herein, consult appropriate legal counsel.



## CONNECTICUT SUPPLEMENT

This Connecticut Environmental Compliance Assessment System (ECAS) Manual contains the protocols necessary for determining compliance with Connecticut environmental rules and regulations. This manual is a supplement to the U.S. ECAS Manual; it does not replace it.

The following Connecticut agencies issue regulations and are responsible for environmental compliance:

- Department of Environmental Protection - has two major divisions, Conservation and Preservation and Environmental Quality. The Environmental Quality Division is responsible for six programs: air compliance, water compliance, waste management, noise control, water resources, and radiation control.
  - Air Compliance Unit - shares responsibility with the USEPA for administration of new source permitting and the prevention of significant deterioration.
  - Natural Resources Center - coordinates evaluation of environmental impact statements and Connecticut Siting Council applications. This unit is responsible for endangered species.
  - Waste Management Bureau - manages all matters concerning hazardous waste, pesticides, oil, and chemical spills, and underground storage tanks. The Bureau shares responsibility with the Department of Health Services for medical waste tracking and management.
  - Water Resources Unit - has authority to administer National Pollutant Discharge Elimination System (NPDES) permits, industrial pretreatment, underground injection permits, and the water pollution permit program for all categories of discharges to surface water, groundwater, and municipal sanitary sewers.
- Department of Health Services, Water Supplies Section - responsible for drinking water standards and water source requirements.
- Department of Motor Vehicles - responsible for motor vehicle noise limits.
- Department of Public Safety - responsible for requirements concerning transportation of hazardous materials.
- Department of Transportation, Bureau of Aeronautics - responsible for airport and airplane management.
- Historic Commission - responsible for historic preservation within the state.



## Acronym List

API	American Petroleum Institute
ASTM	American Society for Testing and Materials
AST	aboveground ground storage tank
BACT	best available control technology
BOD	biological (biochemical) oxygen demand
BTEX	xylene
Btu	British thermal units
CAA	<i>Clean Air Act</i>
CAS	Chemical Abstract Service
CERCLA	<i>Comprehensive Environmental Response, Compensation, and Liability Act</i>
CFR	Code of Federal Regulations
CWA	<i>Clean Water Act</i>
dB	decibel
dba	decibels using A-weighting network
dbc	decibels using C-weighting network
DCR	discharge cleanup and removal plan
DEQ	Department of Environmental Quality
DGW	discharge to groundwater
DOD	Department of Defense
DPCC	discharge prevention, elimination, and countermeasure plan
DPD	diethylenediamine
DSW	discharge to surface water
DTW	domestic treatment works
EC	effective concentration
ECAS	Environmental Compliance Assessment System
EDB	ethylene dibromide
EDC	1,2-dichloroethane
EPM	Environmental Program Management
FIFRA	<i>Federal Insecticide, Fungicide, and Rodenticide Act</i>
FR	Federal Register
FY	Federal fiscal year
GVWR	gross vehicle weight rating
HEPA	high efficiency particulate air (filter)
HWM	hazardous waste management
ICRU	International Commission on Radiological Units and Measurements
IWMF	industrial waste management system
LAER	lowest achievable emission rate
LC	lethal concentration
Ldn	day-night airport noise level
Leq	equivalent noise level
MC	medium curing
MBtu	million British thermal unit
MCL	maximum contaminant level
MFL	million fibers per liter
MPN	most probable number
MSDS	material safety data sheets
NACE	National Association of Corrosion Engineers
NBS	National Bureau of Standards
NEPA	<i>National Environmental Policy Act</i>
NHPA	<i>National Historic Preservation Act</i>

## Acronym List

NPDES	national pollutant discharge elimination system
NTNCWS	nontransient noncommunity water system
OSHA	Occupational Safety and Health Administration
PAH	polycyclic aromatic hydrocarbons
PBB	polybrominated biphenyl
PCB	polychlorinated biphenyl
POTW	publicly owned treatment works
RC	rapid curing
RCRA	<i>Resource Conservation and Recovery Act</i>
RCRA-C	<i>Resource Conservation and Recovery Act - Subtitle C</i>
RCRA-D	<i>Resource Conservation and Recovery Act - Subtitle D</i>
RCRA-I	<i>Resource Conservation and Recovery Act - Subtitle I</i>
SARA	<i>Superfund Amendments and Reauthorization Act</i>
SC	slow curing
SDWA	<i>Safe Drinking Water Act</i>
SIC	standard industrial classification
SIU	significant indirect user
SOP	standard operating procedure
SPCC	spill prevention countermeasure and control plan
SPL	sound pressure level
SWDA	<i>Solid Waste Disposal Act</i>
SWF	solid waste facility
TDS	total dissolved solids
TPH	total petroleum hydrocarbons
TRI	toxic release inventory
TSCA	<i>Toxic Substance Control Act</i>
TSD	treatment, storage, and disposal
TSDF	treatment, storage, and disposal facility
TVOS	toxic volatile organic substance
UIC	underground injection control
UL	Underwriter's Laboratories'
USDW	underground source of drinking water
USEPA	U.S. Environmental Protection Agency
UST	underground storage tank
VOC	volatile organic compound
VOS	volatile organic substance
WPCF	water pollution control facilities

## Abbreviations

bbl	barrel	$\mu$ N	micronewtons
C	Celsius	meq	milliequivalent
cm	centimeter	min	minute
cm <sup>2</sup>	square centimeter	MJ	MegaJoule
cm <sup>3</sup>	cubic centimeter	mL	milliliter
F	Fahrenheit	mo	month
ft	foot	mm	millimeter
ft <sup>2</sup>	square feet	Mg	megagram
ft <sup>3</sup>	cubic feet	mrem	millirem
g	gram	MW	megawatt
gal	gallon	ng	nanogram
gJ	gigaJoule	NTU	nephelometric turbidity unit
gr	grain	oz	ounce
h	hour	pci	picoCuries
ha	hectare	ppm	parts per million
hp	horsepower	ppb	parts per billion
in.	inch	psi	pounds per square inch
J	Joule	psia	pounds per square inch absolute
kg	kilogram	psig	pounds per square inch gauge
km	kilometer	qt	quart
L	liter	s	second
lb	pound	scf	standard cubic feet
m	meter	scm	standard cubic meter
m <sup>2</sup>	square meter	V	volt
m <sup>3</sup>	cubic meter	yd	yard
mg	milligram	yd <sup>2</sup>	square yard
mi	mile	yd <sup>3</sup>	cubic yard
$\mu$ g	microgram	yr	year
$\mu$ m	micrometer	mm Hg	millimeters of mercury
$\mu$ Pa	micropascals	mgd	milligrams per day
kPa	kiloPascal		

## Chemicals

CO	carbon monoxide
CO <sub>2</sub>	carbon dioxide
Hg	mercury
NO <sub>x</sub>	nitrogen oxide
SO <sub>2</sub>	sulfur dioxide
NO <sub>2</sub>	nitrogen dioxide



## METRIC CONVERSION TABLE

1 in.	=	25.4 mm
1 ft	=	0.305 m
1 kip	=	4448 N
1 psi	=	6.89 kPa
1 psi	=	89.300 g/cm <sup>2</sup>
1 lb	=	0.453 kg
1 lb/h	=	0.126 g/s
1 cu ft	=	0.028 m <sup>3</sup>
1 mi	=	1.61 km
1 ft <sup>2</sup>	=	0.093 m <sup>2</sup>
1 gal	=	3.78 L
°F	=	(°C + 17.78) × 1.8
°C	=	0.55(°F-32)
1 yd	=	0.9144 m
1 Btu/lb	=	0.556 cal/g





## **SECTION 1**

**CLEAN AIR ACT (CAA)**

**Connecticut Supplement**

# SECTION 1

## CLEAN AIR ACT (CAA)

### Connecticut Supplement

#### Definitions

These definitions were obtained from the following sections of the Connecticut Department of Environmental Protection (CDEP) Regulations Concerning Abatement of Air Pollution: 22a-174-1, 22a-174-20(a)(1), 22a-174-20(a)(2), 22a-174-20(k)(1), 22a-174-20(l)(1), 22a-174-20(v)(1), and 22a-174-30(a).

- *Air Pollutant* - dust, fumes, mist, smoke, other particulate matter, vapor, gas, aerosol, odorous substances, or any combination thereof. This definition does not include CO<sub>2u</sub>, uncombined water vapor or water droplets, or molecular oxygen or nitrogen.
- *Air Pollution* - the presence in the outdoor atmosphere of one or more air pollutants or any combination thereof in such quantities and of such characteristics and duration as to be, or likely to be, injurious to public welfare; to the health of human, plant, or animal life, or to property, or as unreasonably to interfere with the enjoyment of life and property.
- *Approved Control System* - a vapor balance system or a vapor recovery system.
- *Asphalt* - a dark-brown cementitious material which is solid, semisolid, or liquid in consistency and in which the predominating constituents are bitumens which occur in nature as such or which are obtained as residue in refining petroleum.
- *Btu* - British thermal unit, the amount of heat required to raise the temperature of 1 lb of water 1 °F.
- *CARB* - the State of California Air Resources Board.
- *Cold Cleaning* - the batch process of cleaning and removing soils from metal surfaces by spraying, brushing, flushing, or immersion while maintaining the degreasing solvent below its boiling point. Wipe cleaning is not included in this definition.
- *Commissioner* - the Commissioner of Environmental Protection, or any member of the Department of Environmental Protection or any local air pollution control official or agency authorized by the Commissioner, acting singly or jointly, to whom the Commissioner assigns any function arising under the provisions of these regulations.
- *Conveyorized Degreasing* - the continuous process of cleaning and removing soils from metal surfaces by operating with either cold or vaporized degreasing solvents.
- *Cutback Asphalt* - asphalt which has been liquefied by blending more than 7 percent organic compounds by volume, as determined by American Society for Testing and Materials (ASTM) Distillation Test D-244.
- *Degreasing Solvent* - any volatile organic compound (VOC) used for metal cleaning.

- *Delivery Vehicle* - a tank truck, tank-equipped trailer, railroad tank car, or other mobile source equipped with a storage tank used for the transportation of gasoline from sources of supply to any stationary storage tank.
- *Department* - the Department of Environmental Protection.
- *Dispensing Facility* - any site where gasoline is transferred to motor vehicles, other than agricultural vehicles, from any stationary source tank with a capacity of 250 gal or more.
- *Emission* - the act of releasing or discharging air pollutants into the ambient air from any source.
- *Flexographic Printing* - the application of words, designs, or pictures to a substrate by means of a roll printing technique in which the pattern to be applied is raised above the printing roll and the image carrier is made of rubber or other elastomeric materials.
- *Freeboard Height* - for a cold cleaner, the distance from the liquid solvent in the degreaser tank to the lip of the tank. For an open top vapor degreaser, it is the distance from the solvent vapor level in the tank during idling to the lip of the tank. For a vapor conveyORIZED degreaser, it is the distance from the vapor level to the bottom of the entrance or exit opening, whichever is lower. For a cold conveyORIZED degreaser, it is the distance from the liquid solvent level to the bottom of the entrance or exit opening, whichever is lower.
- *Freeboard Ratio* - the freeboard height divided by the smaller interior dimension (length, width, or diameter) of the degreaser.
- *Fuel-burning Equipment* - any furnace, boiler, apparatus, stack, and all appurtenances thereto, used in the process of burning fuel for the primary purpose of producing heat or power.
- *Fugitive Dust* - solid airborne particulate matter emitted from any source other than through a stack.
- *Gasoline* - any petroleum distillate or blend of petroleum distillate and alcohol having a Reid vapor pressure of 4 psi or greater and used as a fuel for internal combustion engines.
- *Incinerator* - any device, apparatus, equipment, or structure used for destroying, reducing, or salvaging by fire any material or substance including, but not limited to, refuse, rubbish, garbage, trade waste, debris, or scrap, or facilities for cremating human or animal remains.
- *Medium-curing Cutback Asphalt* - the material which meets the specifications of the ASTM Designation D 2028.
- *Metal Cleaning* - the process of cleaning soils from metal surfaces by cold cleaning, open top vapor degreasing, or conveyORIZED degreasing.
- *Mobile Source* - a source designed or constructed to move from one location to another during normal operation except portable equipment, including, but not limited to, automobiles, buses, trucks, tractors, earth moving equipment, hoists, cranes, aircraft, locomotives operating on rails, vessels for transportation on water, lawnmowers, and other small home appliances.
- *Opacity* - the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.

- *Open Burning* - the burning of any matter in such a manner that the products of combustion resulting from the burning are emitted directly into the ambient air without passing through an adequate stack or flue.
- *Open Top Vapor Degreasing* - the batch process of cleaning and removing soils from metal surfaces by condensing hot degreasing solvent vapor on the colder metal parts.
- *Operator* - the person or persons who are legally responsible for the operation of a source of air pollution.
- *Packaging Rotogravure Printing* - rotogravure printing upon paper, paperboard, metal foil, plastic film, or other substrates, which are, in subsequent operations, formed into packaging products or labels for articles to be sold.
- *Particulate Matter* - any material, except water in uncombined form, that is or has been airborne and exists as a liquid or a solid at standard conditions.
- *Penetrating Prime Coat* - an application of low-viscosity liquid asphalt to an absorbent surface which is used to prepare an untreated base prior to the application of an asphalt surface.
- *Pressure Tank* - a stationary storage tank that is capable of maintaining working pressures sufficient at all times to prevent vapor or gas loss to the atmosphere or is designed and equipped with a vapor loss control device.
- *Process Source* - any operation, process, or activity except:
  1. the burning of fuel for indirect heating in which the products of combustion do not come in contact with process material
  2. the burning of refuse
  3. the processing of salvageable material by burning.
- *Publication Rotogravure Printing* - rotogravure printing upon paper which is subsequently formed into books, magazines, catalogues, brochures, directories, newspaper supplements, or other types of printed materials.
- *Refrigerated Chiller* - a device which is mounted above the water jacket and the primary condenser coils, consisting of secondary coils which carry a refrigerant to provide a chilled air blanket above the solvent vapor to reduce emissions from the degreaser bath. The chilled air blanket temperature, measured at the centroid of the degreaser at the coldest point, is to be no greater than 30 percent of the solvent's boiling point in degrees Fahrenheit.
- *Reid Vapor Pressure (RVP)* - the vapor pressure of a liquid in pounds per square inch absolute at 100 °F as determined by ASTM method D323-82.
- *Residual Oil* - any fuel oil of No. 4, No. 5, or No. 6 grades, as defined by Commercial Standard (CS) 12-48.
- *Ringelmann Chart* - the chart published and described in the U.S. Bureau of Mines Information Circular 8333.
- *Roll Printing* - the application of words, designs, or pictures to a substrate usually by means of a series of hard rubber or steel rolls, each with only partial coverage.

- *Rotogravure Printing* - the application of words, designs, or pictures to a substrate by means of a roll printing technique which involves intaglio or recessed image areas in the form of cells or indentations.
- *Source* - any property, real or personal, which emits or may emit any air pollutant.
- *Stage II Vapor Recovery System* - a vapor recovery system which prevents discharge to the atmosphere of at least 95 percent by weight of gasoline vapors displaced during the dispensing of gasoline into a motor vehicle fuel tank.
- *Standard Conditions* - a dry gas temperature of 68 °F and a gas pressure of 14.7 psia (20 °C, 760 mm Hg).
- *Stationary Source* - any building, structure, facility, equipment, or operation which is located on one or more contiguous or adjacent properties and which is owned by or operated by the same person or persons under common control, which emits or may emit any air pollutant, and which does not move from location to location during normal operation.
- *Submerged Fill Pipe* - any fill pipe the discharge opening of which is still entirely submerged when the pipe normally used to withdraw liquid from the tank can no longer withdraw any liquid.
- *Tank* - any vessel for containing liquids or gases.
- *Throughput* - the number of gallons of gasoline delivered into motor vehicles through all equipment at a dispensing facility over a specified period of time.
- *Vapor Balance System* - a combination of pipes or hoses which create a closed connection between the vapor spaces of an unloading tank and receiving tank such that vapors displaced from the receiving tank are transferred to the tank being unloaded and for which the vapor space connections on the unloading tank, the receiving tank, and the pipes or hoses used are equipped with fittings which are vapor tight and which will automatically and immediately close upon disconnection so as to prevent the release of vapors. The complete system as a whole and not just the individual components must have been tested and approved by a nationally recognized testing laboratory.
- *Vapor Recovery System* - a device or system of devices with attendant valves, fittings, piping, and other appurtenances incorporating a means for the incineration of vapors or the liquefaction of vapors by absorption, adsorption, condensation, or other means. The complete system as a whole, not just the individual components, must have been tested and approved by a nationally recognized testing laboratory.
- *Volatile Organic Compounds (VOCs)* - any compound of carbon which participates in atmospheric photochemical reactions excluding CO, CO<sub>2</sub>, carbonic acid, metallic carbides or carbonates, ammonium carbonate and the following organic compounds, which have negligible photochemical reactivity: methane; ethane; 1,1,1 trichloroethane; methylene-chloride; trichlorofluoromethane; dichlorofluoromethane; chlorodifluoromethane; trifluoromethane; trichloro-trifluoroethane; dichlorotetrafluoroethane; chloropentafluoroethane; dichloro-trifluoroethane; tetrafluoroethane; dichlorofluoroethane; and chlorodifluoro-ethane.
- *Wastewater Separator* - any tank, box, sump, or other container in which any VOC floating on or entrained or contained in water entering, such tank, box, sump, or other container, is physically separated and removed from such water prior to outfall, drainage, or recovery of such water.

**CLEAN AIR ACT (CAA)**  
**GUIDANCE FOR CONNECTICUT CHECKLIST USERS**

<b>Applicability:</b>	<b>Refer to Checklist Items:</b>
Registration and Permits	1-1 and 1-2
Air Pollution Emergency Episodes	1-3
Open Burning	1-4
Particulate Emissions	1-5 through 1-7
Fugitive Dust	1-8
Incinerators	1-9 and 1-10
Fuel Burning Equipment	1-11
Process Industries	1-12
Storage VOCs	1-13
Loading of Gasoline and Other VOCs	1-14
Cutback Asphalt	1-15
Wastewater Separators	1-16
Pumps and Compressors	1-17
Organic Solvents	1-18
Disposal and Evaporation of Solvents	1-19
Metal Cleaning	1-20 through 1-22
Graphic Arts	1-23
Nitrogen Oxides	1-24 through 1-28
Odorous Emissions	1-29
Dispensing of Gasoline/Stage II Vapor Recovery	1-30 through 1-33
Motor Vehicle Emissions	1-34



<b>COMPLIANCE CATEGORY:</b> <b>CLEAN AIR ACT (CAA)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<b>REGISTRATION AND PERMITS</b>  <b>1-1.</b> Installations that operate stationary sources of air pollutants are required to register the sources (CDEP 22a-174-2(a) and (b)).  <b>1-2.</b> Installations are required to obtain a permit before constructing, modifying, or beginning operation of a stationary source (CDEP 22a-174-3(a)(1) and (f)(1)).  <b>AIR POLLUTION EMERGENCY EPISODES</b>  <b>1-3.</b> Installations are required to develop an emission reduction plan to be implemented in the event of an air pollution episode (CDEP 22a-174-6(d)(2)).  <b>OPEN BURNING</b>  <b>1-4.</b> Installations are required to obtain an open burning certificate before setting an open fire (CDEP 22a-174-17(b)(1)(i) through (iii), (v) and 22a-174-17(c)(1)).	<p>Determine if the installation operates a stationary source of air pollutants.</p> <p>Verify that the installation submits a stationary source registration statement to the Commissioner.</p> <p>(NOTE: Two or more stationary sources of a similar or identical nature located on the same premise are considered a single aggregate source for registration purposes.)</p> <p>Determine if the installation operates a stationary source.</p> <p>Verify that the installation has obtained the required permit.</p> <p>Verify that the emission reduction plan contains detailed steps to be taken by the installation to reduce the emission of air pollutants during each stage of an air pollution emergency episode.</p> <p>(NOTE: The three stages of air pollution episodes are: alert, warning, and emergency.)</p> <p>Determine if the installation engages in any of the following types of open burning, which are exempt from this regulation:</p> <ul style="list-style-type: none"> <li>- barbecues or other outdoor open fires for the cooking of food for human consumption</li> <li>- campfires, bonfires, and other fires for ceremonial or recreational purposes</li> <li>- fires to abate an immediate fire hazard, if that abatement fire is supervised by a responsible fire official</li> <li>- fires in salamanders or other similar devices used by construction or other workers for heating purposes, when the fires are essential to street installation or paving activities, the repairing of utilities, or other similar work.</li> </ul>



<b>COMPLIANCE CATEGORY:</b> <b>CLEAN AIR ACT (CAA)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>1-4. (continued)</b></p> <p><b>PARTICULATE EMISSIONS</b></p> <p><b>1-5.</b> Installations are required to restrict the emissions of particulate matter from stationary sources (CDEP 22a-174-18(a)(1)(i) and (ii)).</p> <p><b>1-6.</b> Installations are required to restrict the emissions of particulate matter from mobile sources (CDEP 22a-174-18(a)(2), (a)(3), (a)(4)(i) and (iii), and (a)(6)).</p> <p><b>1-7.</b> Installations are required to restrict the emissions of particulate matter from stationary or idling mobile sources (CDEP 22a-174-18(a)(5) and (a)(6)).</p>	<p>Verify that the installation has obtained the required open burning certificate from the Commissioner for any open burning operations.</p> <p>Verify that the installation does not allow the emission of visible air pollutants of a shade or density equal to or darker than that designated as No. 1 on the Ringelmann Chart, or 20 percent opacity.</p> <p>Verify that the installation does not discharge air pollutants into the atmosphere from any source of emission for a period or periods aggregating not more than 5 min in any 60 min of a shade or density darker than No. 2 on the Ringelmann Chart, or 40 percent opacity.</p> <p>(NOTE: This regulation does not apply to mobile sources in the process of being repaired, aircraft, locomotives operating on rails, vessels for transportation on water, lawnmowers, snowblowers, and other small home appliances.)</p> <p>Verify that the installation does not allow the emission of visible air pollutants from gasoline-powered mobile sources for longer than 5 consecutive seconds.</p> <p>Verify that the installation does not allow the emission of clearly visible air pollutants, that is, comparable to a shade or density equal to or darker than No. 1 on the Ringelmann Chart, or 20 percent opacity, from diesel powered motor vehicles for more than 10 consecutive seconds, during which time the maximum shade or density of emissions is no darker than No. 2 on the Ringelmann Chart, or 40 percent opacity.</p> <p>(NOTE: It is not considered a violation of this regulation when the presence of uncombined water, such as water vapor, is the only reason for the failure of an emission to meet the stated requirements.)</p> <p>Verify that the installation does not allow the engine of a mobile source to operate for more than 3 consecutive minutes when the mobile source is not in motion, unless one of the following conditions is met:</p> <ul style="list-style-type: none"> <li>- when a mobile source is forced to remain motionless because of traffic conditions or mechanical difficulties over which the operator has no control</li> <li>- when it is necessary to operate heating, cooling, or auxiliary equipment installed on the mobile source when such equipment is necessary to accomplish the intended use of the mobile source</li> </ul>

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<p><b>1-7. (continued)</b></p>	<ul style="list-style-type: none"> <li>- to bring the mobile source to the manufacturer's recommended operating temperature</li> <li>- when the outdoor temperature is below 20 °F</li> <li>- when the mobile source is being repaired.</li> </ul> <p>(NOTE: This regulation does not apply to aircraft, locomotives operating on rails, vessels for transportation on water, lawnmowers, snowblowers, and other small home appliances.)</p>
<p><b>FUGITIVE DUST</b></p> <p><b>1-8.</b> Installations are required to prevent particulate matter from becoming airborne (CDEP 22a-174-18(b)).</p>	<p>Verify that the installation does not allow any materials to be handled, transported, or stored, or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished, without taking reasonable precautions to prevent particulate matter from becoming airborne.</p> <p>Verify that when possible, water or chemicals are used for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land.</p> <p>Verify that materials stockpiles and other materials which can give rise to airborne dust are managed with an application of asphalt, oil, water, or suitable chemicals.</p> <p>Verify that hoods, fans, and fabric filters are used to enclose and vent the handling of dusty materials.</p> <p>Verify that adequate containment methods are employed during sand-blasting or other similar operations.</p> <p>Verify that at all times when in motion, open-bodied trucks and trains are covered when transporting materials likely to give rise to airborne dusts.</p> <p>Verify that earth or other material is promptly removed from paved streets when it has been deposited by trucking or earth-moving equipment, erosion by water, or other means.</p> <p>(NOTE: Agricultural activities are exempt from this regulation. However, agricultural practices such as tilling of land and application of fertilizers are to be conducted in a manner to minimize dust from becoming airborne.)</p>

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<b>1-8. (continued)</b>	<p>Verify that the installation does not allow the discharge of visible emissions beyond the lot line of the property on which the emissions originate under the following conditions:</p> <ul style="list-style-type: none"> <li>- the emissions remain visible and exist near ground level outside the property boundaries</li> <li>- the emissions remain visible and impinge on a building or structure so the health, safety, or enjoyment of life of the public may be diminished.</li> </ul> <p>Verify that the installation does not emit particulate matter into the open air in such a manner as to cause a nuisance.</p>
<b>INCINERATORS</b>	
<b>1-9.</b> Installations are required to restrict the emission of particulate matter from incinerators (CDEP 22a-174-18(c)(3) (i), (iii) and (c)(6)).	<p>(NOTE: This regulation does not apply to incinerators used in dwellings containing six or fewer family units.)</p> <p>Verify that the installation does not construct or use any new incinerator which results in particulate matter in the effluent in excess of 0.08 gr/scf (0.18 gm/m<sup>3</sup>), corrected to 12 percent CO<sub>2</sub>, maximum 2-h average.</p> <p>Verify that the installation does not use any existing incinerator emitting more than 0.4 lb of particulates per 1000 lb of flue gases, adjusted to 50 percent excess air.</p> <p>Verify that the installation does not allow the emission from any incinerator of particulates of unburned waste or ash which are individually large enough to be discernible by the human eye.</p>
<b>1-10.</b> Installations that operate incinerators are required to meet specific operating standards (CDEP 22a-174-18(c)(4)).	<p>Verify that the installation has posted the approved operating procedures and rated burning capacity of the incinerator at a convenient place as near as practical to the point of operation.</p> <p>Verify that the installation does not use any incinerator unless all components connected, attached to, or serving the incinerator that affect air pollution are functioning properly and are in use, in accordance with the permit to construct and the certificate or permit to operate.</p>

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<p><b>FUEL BURNING EQUIPMENT</b></p> <p><b>1-11.</b> Installations are required to restrict the emission of particulate matter from fuel burning equipment (CDEP 22a-174-18(d)(1) and (d)(2)).</p>	<p>Verify that the installation does not emit particulate matter from fuel burning equipment in excess of the following limits:</p> <ul style="list-style-type: none"> <li>- 0.10 lb of particulate matter per million Btu (MBtu) heat input for all types of fuel</li> <li>- 0.14 lb of particulate matter per MBtu heat input for residual oil</li> <li>- 0.20 lb of particulate matter per MBtu heat input for all except residual oil.</li> </ul> <p>(NOTE: For purposes of this regulation, the heat input value used is the actual firing rate of the fuel burning equipment.)</p>
<p><b>PROCESS INDUSTRIES</b></p> <p><b>1-12.</b> Installations are required to restrict the emission of particulate matter from process sources (CDEP 22a-174-18(e)(1)).</p>	<p>Verify that the installation does not allow the emission of particulate matter in any 1 h from any source in excess of the amounts listed in Appendix 1-1.</p>
<p><b>STORAGE OF VOCs</b></p> <p><b>1-13.</b> Installations are required to restrict the emission of VOCs from stationary storage vessels (CDEP 22a-174-20(a)(2), (a)(3), (a)(4) and (a)(8)).</p>	<p>Verify that the installation does not place, store, or hold in any stationary storage vessel of more than 250 gal (950 L) capacity any VOC with a vapor pressure of 1.5 psi or greater under actual storage conditions, unless one of the following conditions is met:</p> <ul style="list-style-type: none"> <li>- the vessel is equipped with a permanent submerged fill pipe with a discharge point 18 in. or less from the bottom of the storage vessel</li> <li>- the storage vessel is a pressure tank capable of maintaining working pressures sufficient at all times to prevent vapor or gas loss to the atmosphere or is designed and equipped with one of the following vapor loss control devices: <ul style="list-style-type: none"> <li>- a fixed roof and a floating roof, consisting of a pontoon type, double deck type roof or internal floating cover, which rests on the surface of the liquid contents and is equipped with a closure seal or seals to close the space between the roof edge and the tank wall</li> </ul> </li> </ul>

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<b>1-13. (continued)</b>	<p>(NOTE: This control equipment is not allowed if the VOC has a vapor pressure of 11.0 psia (568 mm Hg) or greater under actual storage conditions. All tank gauging or sampling devices must be gas-tight except when tank gauging or sampling is taking place.)</p> <ul style="list-style-type: none"> <li>- a vapor recovery system that collects all VOC vapors and gases discharged from the tank and a vapor return or disposal system designed to process such vapors so as to reduce their emission to the atmosphere by at least 95 percent by weight</li> <li>- other equipment or means with efficiency equal to the required air pollution control and approved by the Commissioner</li> <li>- a floating roof consisting of a pontoon type, double deck type roof or external floating cover, which rests on the surface of the secondary closure seals to close the space between the roof edge and the tank wall.</li> </ul> <p>(NOTE: This control equipment is not allowed if the VOC has a vapor pressure of 11.0 psia (568 mm Hg) or greater under actual storage conditions. All tank gauging or sampling devices must be gas-tight, except when tank gauging or sampling is taking place.)</p> <p>Verify that, if a floating roof is used as the control device, it meets the following standards:</p> <ul style="list-style-type: none"> <li>- there are no visible holes, tears, or other openings in the seal or any seal fabric or materials</li> <li>- all openings except stub drains are equipped with covers, lids, or seals, so that: <ul style="list-style-type: none"> <li>- the cover, lid, or seal is in the closed position at all times except in actual use</li> <li>- automatic bleeder vents are closed at all times except when the roof is being floated off or being landed on the roof leg supports</li> <li>- rim vents, if provided, are set to open when the roof is being floated off the roof leg supports or at the manufacturer's recommended setting</li> </ul> </li> <li>- routine inspections are conducted through roof hatches once per month</li> <li>- a complete inspection of cover and seal is conducted whenever the tank is emptied for nonoperational reasons but, in any event, at least once per year</li> <li>- records of the average monthly storage temperature, true vapor pressure, monthly throughput, type of VOC stored, and the results of the required inspections are maintained and kept for a minimum of 2 yr after such record is made.</li> </ul> <p>(NOTE: This regulation does not apply to the loading of VOC into any storage vessel with a capacity of less than 1000 gal which was installed prior to 1 June 1972, nor to any underground storage vessel installed prior to 1 June 1972, where the fill pipe between the fill connection and the storage vessel is an offset fill pipe.)</p>

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<p><b>LOADING OF GASOLINE AND OTHER VOCs</b></p> <p><b>1-14.</b> Installations are required to restrict the emission of VOCs during the transfer of gasoline (CDEP 22a-174-20(b)(4), (b)(6), (b)(7), (b)(9)).</p>	<p>Verify that the installation does not transfer gasoline to or from any delivery vehicle to or from any loading facility with a throughput of less than 10,000 gal a day and more than 4000 gal a day, unless the following conditions are met:</p> <ul style="list-style-type: none"> <li>- the transfer takes place through a submerged fill pipe</li> <li>- a vapor balance system is used.</li> </ul> <p>Verify that the installation does not use any stationary storage tank for gasoline with a capacity of more than 250 gal and a throughput of 10,000 gal or more per 30-day period, unless the tank has an approved control system.</p> <p>Verify that the installation does not transfer gasoline from a delivery vehicle to a stationary storage tank, subject to the rule outlined in the pervious paragraph, unless the following conditions are met:</p> <ul style="list-style-type: none"> <li>- the transfer is made through a properly maintained and operated approved control system in good working order, connected and operated</li> <li>- there are no leaks in the tank trucks' or trailers' pressure/vacuum relief valves and hatch covers, nor in the truck tanks, storage tank or associated vapor and liquid lines during loading or unloading.</li> </ul> <p>Verify that all delivery vehicles meet the following standards:</p> <ul style="list-style-type: none"> <li>- the delivery vehicle is designed and maintained to be vapor-tight at all times</li> <li>- the hatches are closed at all times during loading and unloading operations</li> <li>- the pressure relief valves are set to release at no less than 0.7 psi.</li> </ul>
<p><b>CUTBACK ASPHALT</b></p> <p><b>1-15.</b> Installations are required to restrict the emission of VOCs from cutback asphalt (CDEP 22a-174-20(k)(2)).</p>	<p>Determine if the installation engages in any of the following types of uses for asphalt, which are exempt from this regulation:</p> <ul style="list-style-type: none"> <li>- medium-curing asphalt used solely as a penetrating prime coat for aggregate bases prior to paving</li> <li>- medium-curing asphalt used for the manufacture of materials for long-period storage or stockpiling of patching mixes used in pavement maintenance</li> <li>- Class 8 bituminous concrete used at any time for surface treatments under 1 in., for crack filling, relief joints, minor leveling, or pothole patching.</li> </ul>

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<p><b>1-15. (continued)</b></p> <p><b>WASTEWATER SEPARATORS</b></p> <p><b>1-16.</b> Installations that use wastewater separators are required to meet specific equipment standards (CDEP 22a-174-20(c)).</p> <p><b>PUMPS AND COMPRESSORS</b></p> <p><b>1-17.</b> Installations that use pumps and compressors to handle VOCs are required to meet specific equipment standards (CDEP 22a-174-20(d)).</p>	<p>Verify that the installation does not store, use, or apply cutback asphalt during the months of June, July, August, and September unless less than 5 percent of the total solvent contained in such cutback asphalt evaporates at a temperature up to and including 500 °F, as determined by ASTM Method D-402.</p> <p>Determine if the installation uses a single or multiple compartment VOCs waste water separator receives effluent water containing 200 gal (760 L) a day or more of any VOC with a vapor pressure of 1.5 psi or more.</p> <p>Verify that the installation does not use any compartment of any single or multiple compartment VOC waste water separator for equipment processing, refining, treating, storing, or handling VOC unless the compartment is equipped with one or more of the following vapor loss control devices, properly installed, in good working order, and in operation:</p> <ul style="list-style-type: none"> <li>- a container with all openings sealed and totally enclosing the liquid contents</li> <li>- a container equipped with a floating roof, consisting of a pontoon type, double deck type roof, or internal floating cover, which will rest on the surface of the contents and be equipped with a closure seal or seals to close the space between the roof edge and container wall</li> <li>- a container equipped with a vapor recovery system which collects all VOCs vapors discharged from the container and which processes these vapors to reduce their emissions by at least 95 percent by weight</li> <li>- a container with other equipment of equal efficiency for purposes of air pollution control.</li> </ul> <p>(NOTE: All gauging and sampling devices are gas-tight, except when gauging or sampling is taking place.)</p> <p>Verify that all pumps and compressors handling VOC with a vapor pressure of 1.5 psi or greater under actual storage conditions are equipped with mechanical seals or other equipment of equal efficiency for purposes of air pollution control, as approved by the Commissioner.</p> <p>(NOTE: If mechanical seals are impractical because of the abrasive or corrosive nature of the liquid handled, best available technology for the reduction of organic compound emissions is deemed equivalent to the use of mechanical seals.)</p>

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<b>ORGANIC SOLVENTS</b>  <b>1-18.</b> Installations are required to restrict emissions from organic materials (CDEP 22a-174-20(f)(1), (f)(2), (f)(4), (f)(6), (f)(7), and (f)(9)(B)).	<p>(NOTE: This requirement does not apply to the spraying or other use of insecticides, pesticides, or herbicides.)</p> <p>Verify that the installation does not discharge into the atmosphere more than 40 lb of organic materials in any one day, or more than 8 lb in any 1 hr, from any article, machine, equipment, or other contrivance in which any organic solvent or any material containing organic solvent comes into contact with flame or is baked, heat-cured, or heat-polymerized, in the presence of oxygen, unless the discharge has been reduced by at least 85 percent overall.</p> <p>Verify that the installation does not discharge into the atmosphere more than 40 lb of organic materials in any 1 day, or more than 8 lb in any 1 h, from any article, machine, other than those described in the pervious paragraph , for using or applying any highly photochemically reactive solvent, as defined in Appendix 1-2, unless the discharge has been reduced by at least 85 percent overall.</p> <p>(NOTE: Emissions of organic materials into the atmosphere resulting from air or heated drying of products for the first 12 h after their removal from any article, machine, equipment or other contrivance are included in determining compliance with this regulation.)</p> <p>(NOTE: Emissions resulting from baking, heat-curing, or heat-polymerizing are exempt from this regulation.)</p> <p>Verify that the installation does not discharge into the atmosphere more than 800 lb of organic materials in any 1 day, or more than 160 lb in any 1 h , from any article, machine, equipment, or other contrivance in which any organic solvent or any materials containing such solvent is used or applied, unless the discharge has been reduced by at least 85 percent overall.</p> <p>(NOTE: Emissions of organic materials into the atmosphere resulting from air or heated drying of products for the first 12 h after their removal from any article, machine, equipment or other contrivance are included in determining compliance with this regulation.)</p> <p>(NOTE: Emissions resulting from baking, heat-curing, or heat-polymerizing are exempt from this regulation.)</p> <p>(NOTE: Those portions of any series of articles, machines, equipment, or other contrivances designed for processing a continuous web, strip, or wire that emits organic materials and using operations described in this section are collectively subject to compliance with these requirements.)</p>



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<b>1-18. (continued)</b>	<p>Verify that the emission limits outlined are achieved by one of the following methods:</p> <ul style="list-style-type: none"> <li>- incineration, if 90 percent or more of the carbon in the organic material being incinerated is oxidized to CO<sub>2</sub> each hour</li> </ul> <p>(NOTE: Incineration is not acceptable for halogenated hydrocarbons.)</p> <ul style="list-style-type: none"> <li>- adsorption, if the organic emissions are reduced by 90 percent or more each hour</li> <li>- a system demonstrated to have equivalent or greater control efficiency, as approved by the Commissioner.</li> </ul> <p>Verify that the installation, if incinerating, adsorbing, or otherwise processing organic materials, provides and maintains devices or procedures as specified by the Commissioner for indicating and recording temperatures, pressures, rates of flow, or other operating conditions necessary to determine the degree and effectiveness of air pollution control.</p>
<b>DISPOSAL AND EVAPORATION OF SOLVENTS</b>	
<b>1-19.</b> Installations are required to restrict the emission of VOCs when disposing of solvents (CDEP 22a-174-20(j)).	<p>Verify that the installation does not, during any 1 day, dispose of more than 1.5 gal (5.7 L) of any VOC or of any material containing more than 1.5 gal (5.7 L) of any such VOC by any means that allows the evaporation of these solvent into the atmosphere.</p>

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<b>METAL CLEANING</b>  <b>1-20.</b> Installations are required to restrict the emissions of VOCs from cold cleaning units (CDEP 22a-174-20(1)(3)).	<p>(NOTE: This regulation does not apply to metal cleaning equipment that uses 1,1,1 trichloroethane, methylene-chloride, or trichlorotrifluoroethane (CDEP 22a-174-20(1)(2)(C).)</p> <p>Determine if the installation uses cold cleaners.</p> <p>Verify that the installation meets the following equipment specifications and operating procedures:</p> <ul style="list-style-type: none"> <li>- the cover of the cleaning device is designed to be easily operated with one hand</li> <li>- an internal drainage facility allows parts to be enclosed under the cover while draining</li> </ul> <p>(NOTE: The drainage facility may be external for applications if an internal type cannot fit into the cleaning system.)</p> <ul style="list-style-type: none"> <li>- waste solvent is stored only in covered containers</li> <li>- waste solvent is not disposed of or transferred to another party in a manner that more than 20 percent of the waste solvent (by weight) evaporates into the atmosphere</li> <li>- the cover remains closed when parts are not being handled in the cleaner for 2 min or more, or when the device is not in use</li> <li>- cleaned parts are drained for at least 15 s, or until dripping ceases, whichever is longer</li> <li>- if used, the degreasing solvent spray is a solid, fluid stream (not a fine, atomized or shower-type spray) at a pressure not to exceed 10 psi as measured at the pump outlet and does not spray outside the confines of the cold cleaning unit</li> <li>- if the solvent vapor pressure is greater than 4.3 kPa (33 mm Hg or 0.6 psi) measured at 38 °C (100 °F), or if the solvent is heated above 50 °C (120 °F)             <ul style="list-style-type: none"> <li>one of the following control devices is used:                 <ul style="list-style-type: none"> <li>- freeboard that gives a freeboard ratio greater than or equal to 0.7</li> <li>- water cover (solvent must be insoluble in and heavier than water)</li> <li>- other systems of equivalent control, equal to that of a refrigerated chiller or carbon adsorption approved by the Commissioner</li> </ul> </li> </ul> </li> <li>- drafts are minimized across the top of each cold cleaning unit so that when the cover is open, the unit is not exposed to drafts greater than 40 m/min as measured between 1 and 2 m upwind, and at the same elevation as the tank lip</li> <li>- operation of the unit is ceased upon the occurrence of any visible solvent leak until the leak is repaired</li> <li>- a permanent, conspicuous label is provided on or near each unit summarizing the applicable operating requirements</li> <li>- a monthly record of the amount of solvent added to each unit is maintained and kept for a minimum of 2 yr.</li> </ul>

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<p><b>1-21.</b> Installations are required to restrict the emissions of VOCs from open top vapor degreasers (CDEP 22a-174-20(1)(2)(A) and (1)(4)).</p>	<p>Determine if the installation uses open top vapor degreasers.</p> <p>Verify that the installation meets the following equipment specifications and operating procedures:</p> <ul style="list-style-type: none"> <li>- the cover of the vapor degreaser can be opened and closed easily without disturbing the vapor zone</li> <li>- the following safety switches are provided: <ul style="list-style-type: none"> <li>- a condenser flow switch and device that shuts off the sump heat if the condenser coolant is not circulating or if the vapor level rises above the height of the primary condenser</li> <li>- a spray safety switch that shuts off the spray pump if the vapor level drops more than 10 cm (4 in.) below the lowest condensing coil</li> </ul> </li> <li>- one of the following control devices is used: <ul style="list-style-type: none"> <li>- powered cover, if the freeboard ratio is greater than or equal to 0.75, and if the degreaser opening is greater than 1 m<sup>2</sup> (10 ft<sup>2</sup>)</li> <li>- refrigerated chiller</li> <li>- enclosed design (cover or door opens only when the dry part is actually entering or exiting the degreaser)</li> <li>- carbon adsorption system, with ventilation greater than or equal to 15 m<sup>3</sup>/min/m<sup>2</sup> (50 ft<sup>3</sup>/min/ft<sup>2</sup>) of solvent/vapor area (when cover is open), and exhausting less than 25 ppm of degreasing solvent averaged each complete adsorption cycle</li> <li>- a control system demonstrated to have control efficiency equivalent to or greater than that required of the carbon adsorption system</li> </ul> </li> <li>- the cover is closed at all times, except when processing workloads through the degreaser</li> <li>- waste solvent is stored only in covered containers</li> <li>- waste solvent is not disposed of or transferred to another party in a manner so more than 20 percent of the waste solvent (by weight) evaporates into the atmosphere</li> <li>- solvent carryout is minimized by: <ul style="list-style-type: none"> <li>- racking parts to allow complete drainage</li> <li>- moving parts in and out of the degreasing unit at less than 3.3. m/min (11 ft/min)</li> <li>- holding the parts in the vapor zone at least 30 s or until condensation ceases, whichever is longer</li> <li>- tipping out any pools of solvent on the cleaned parts before removal from the</li> <li>- allowing parts to dry within the degreasing unit for at least 15 s or until visually dry, whichever is longer</li> </ul> </li> <li>- porous or adsorbent materials, such as cloth, leather, wood, or rope, are not degreased</li> <li>- the workload does not occupy more than half of the degreaser unit's open top area</li> <li>- the vapor level does not drop more than 10 cm (4 in.) when the workload is removed from the vapor zone</li> </ul>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>1-21. (continued)</b></p>	<ul style="list-style-type: none"> <li>- always spray within the vapor level</li> <li>- water is not visually detectible in solvent exiting the water separator</li> <li>- do not expose the degreasing unit to drafts greater than 40 m/min (131 ft/min) as measured between 1 and 2 m upwind and at the same elevation as the tank lip, nor provide exhaust ventilation exceeding 20 m<sup>3</sup>/min/m<sup>2</sup> (65 ft<sup>3</sup>/min/ft<sup>2</sup>) of degreasing unit open area, unless necessary to meet OSHA requirements</li> <li>- operation of the unit is ceased upon the occurrence of any visible solvent leak until such leak is repaired</li> <li>- a permanent, conspicuous label is provided on or near each unit summarizing the applicable operating requirements</li> <li>- a monthly record of the amount of solvent added to each unit is maintained and kept for a minimum of 2 yr.</li> </ul>
<p><b>1-22.</b> Installations are required to restrict the emissions of VOCs from conveyorized degreasers (CDEP 22a-174-20(1)(2)(B) and (1)(5)).</p>	<p>Determine if the installation uses conveyorized degreasers.</p> <p>Verify that the installation meets the following equipment specifications and operating procedures:</p> <ul style="list-style-type: none"> <li>- one of the following control devices is used: <ul style="list-style-type: none"> <li>- refrigerated chiller</li> <li>- carbon adsorption system, with ventilation greater than or equal to 15 m<sup>3</sup>/min/m<sup>2</sup> (50 ft<sup>3</sup>/min/ft<sup>2</sup>) or solvent/air area (when downtime covers are open), and exhausting less than 25 ppm of degreasing solvent by volume averaged over each complete adsorption cycle</li> <li>- a control system demonstrated to have control efficiency equivalent to or greater than that required of the carbon adsorption system described here</li> </ul> </li> </ul> <p>(NOTE: Conveyorized degreasers with a solvent/air interface smaller than 2 m<sup>2</sup> (21.6 ft<sup>2</sup>) are exempt from using one of the control devices described here.)</p> <ul style="list-style-type: none"> <li>- the following safety switches are provided: <ul style="list-style-type: none"> <li>- a condenser flow switch and device that shuts off the sump heat if the condenser coolant is not circulating or if the vapor level rises above the height of the primary condenser</li> <li>- a spray safety switch which shuts off the spray pump or the conveyor if the vapor level drops more than 10 cm (4 in.) below the lowest condensing coil</li> </ul> </li> <li>- waste solvent is stored only in covered containers</li> <li>- waste solvent is not disposed of or transferred to another party in a manner that more than 20 percent of the waste solvent (by weight) evaporates into the atmosphere</li> </ul>

<b>COMPLIANCE CATEGORY:</b> <b>CLEAN AIR ACT (CAA)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>1-22. (continued)</b></p>	<ul style="list-style-type: none"> <li>- parts are racked to allow complete drainage</li> <li>- conveyor speed is maintained at less than eleven 11 ft/min</li> <li>- a drying tunnel, rotating basket, or other equivalent method is used to prevent cleaned parts from carrying out solvent liquid</li> <li>- covers are placed over entrances and exits immediately after conveyors and exhausts are shut down and left in place until just prior to start-up</li> <li>- openings are minimized during operation so entrances and exits will silhouette workloads with an average degreasing unit opening of less than 10 cm (4 in.) or less than 10 percent of the width of the opening</li> <li>- water is not visually detectible in solvent exiting the water separator</li> <li>- do not provide exhaust ventilation exceeding 20 m<sup>3</sup>/min/m<sup>2</sup> (65 ft<sup>3</sup>/min/ft<sup>2</sup>) of degreasing unit open area, unless necessary to meet OSHA requirements</li> <li>- operation of the unit is ceased upon the occurrence of any visible solvent leak until the leak is repaired</li> <li>- a permanent, conspicuous label is provided on or near each unit summarizing the applicable operating requirements</li> <li>- a monthly record of the amount of solvent added to each unit is maintained and kept for a minimum of 2 yr.</li> </ul>
<p><b>GRAPHIC ARTS</b></p> <p><b>1-23.</b> Installations are required to restrict the emission of VOCs from rotogravure or flexographic printing processes (CDEP 22a-174-20(v)(2) and (v)(3)).</p>	<p>Determine if the installation operates a packaging rotogravure, publication rotogravure, or flexographic printing operation.</p> <p>Verify that the installation does not operate a printing process employing solvent containing ink, unless one of the following conditions is met:</p> <ul style="list-style-type: none"> <li>- the volatile fraction of each ink, as it is applied to the substrate, contains 25 percent by volume or less of VOC and 75 percent by volume or more of water and exempt VOC listed in Appendix 1-3</li> <li>- each ink as it is applied to the substrate, less water and exempt VOC listed in Appendix 1-3, contains 60 percent by volume or more nonvolatile material</li> <li>- one of the following control systems is used: <ul style="list-style-type: none"> <li>- a carbon adsorption system that reduces the volatile organic emissions from the capture system by at least 90 percent by weight over the adsorption cycle or 24 h, whichever is shorter</li> <li>- an incineration system, if 90 percent of the nonmethane VOC (measured as total combustible carbon) that enters the incinerator per hour is oxidized to CO<sub>2</sub> and water</li> <li>- a system demonstrated to have control efficiency equivalent to or greater than the above required 90 percent and approved by the Commissioner.</li> </ul> </li> </ul>

<b>COMPLIANCE CATEGORY:</b> <b>CLEAN AIR ACT (CAA)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>1-23. (continued)</b></p>	<p>Verify that the capture system, used in conjunction with the emission control systems described here, reduces VOC emissions per hour from each printing press by at least the following:</p> <ul style="list-style-type: none"> <li>- 0.75 percent if a publication rotogravure process is employed</li> <li>- 0.65 percent if a packaging rotogravure process is employed</li> <li>- 0.60 percent if a flexographic printing process is employed.</li> </ul>
<p><b>NITROGEN OXIDES</b></p>	
<p><b>1-24.</b> Installations are required to restrict the emission of NO<sub>x</sub> from gas-fired, fuel burning equipment (CDEP 22a-174-22(a)(1)).</p>	<p>Determine if the installation operates gas-fired, fuel burning equipment.</p> <p>Verify that the installation does not allow the emission of NO<sub>x</sub>, calculated as NO<sub>2</sub>, from gas-fired fuel, burning equipment in excess of 0.2 lb/MBtu of heat input, except that:</p> <ul style="list-style-type: none"> <li>- the emission limit is 0.9 lb/MBtu for boilers with a cyclone furnace or furnaces having a maximum rated capacity of 250 MBtu/h or more.</li> </ul>
<p><b>1-25.</b> Installations are required to restrict the emission of NO<sub>x</sub> from oil-fired, fuel burning equipment (CDEP 22a-174-22(a)(2)).</p>	<p>Determine if the installation operates oil-fired, fuel burning equipment.</p> <p>Verify that the installation does not allow the emission of NO<sub>x</sub>, calculated as NO<sub>2</sub>, from oil-fired fuel burning equipment in excess of 0.30 lb/MBtu (0.54 gm/million gm-cal) of heat input, except that:</p> <ul style="list-style-type: none"> <li>- the emission limit is 0.5 lb/MBtu of heat input for existing fast response double-furnace naval boilers</li> <li>- the emission limit is 0.9 lb/MBtu of heat input for existing boilers with a cyclone furnace or furnaces.</li> </ul>
<p><b>1-26.</b> Installations are required to restrict the emission of NO<sub>x</sub> from coal-fired fuel, burning equipment (CDEP 22a-174-22(a)(3) and (a)(4)).</p>	<p>Determine if the installation operates coal-fired, fuel burning equipment.</p> <p>Verify that the installation does not allow the emission of NO<sub>x</sub>, calculated as NO<sub>2</sub>, from a coal-fired boiler in excess of the following:</p> <ul style="list-style-type: none"> <li>- 0.7 lb/MBtu of heat input per hour for new sources</li> <li>- 0.9 lb/MBtu for existing sources.</li> </ul> <p>(NOTE: These regulations apply to all equipment with a maximum capacity rating above 250 MBtu/h. For equipment rated between 5 and 250 MBtu/h, these regulations apply unless the Commissioner is satisfied that it is not technically or economically feasible for a unit of the size considered.)</p> <p>(NOTE: These regulations do not apply to stationary gas turbines, stationary internal combustion engines, and mobile sources.)</p>

<b>COMPLIANCE CATEGORY:</b> <b>CLEAN AIR ACT (CAA)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>1-27.</b> Installations are required to restrict the emission of NO<sub>x</sub> from stationary gas turbines (CDEP 22a-174-22(a)(5)).</p>	<p>Determine if the installation operates stationary gas turbines.</p> <p>Verify that the installation does not allow the emission of NO<sub>x</sub>, calculated as NO<sub>2</sub>, from a stationary gas turbine in excess of 0.9 lb/MBtu of heat input.</p>
<p><b>1-28.</b> Installations are required to restrict the emission of NO<sub>x</sub> from nonfuel burning sources (CDEP 22a-174-22(c)).</p>	<p>Determine if the installation operates nonfuel burning sources that emit NO<sub>2</sub>.</p> <p>Verify that the installation does not allow the emission of NO<sub>x</sub>, calculated as NO<sub>2</sub>, from a nonfuel burning source in excess of 700 ppm by volume.</p>
<p><b>ODOROUS EMISSIONS</b></p>	
<p><b>1-29.</b> Installations are prohibited from emitting odorous emissions (CDEP 22a-174-23(a) and (d)).</p>	<p>Verify that the installation does not emit into the outdoor air any substance which creates an objectionable odor beyond its property line.</p> <p>(NOTE: This regulation does not apply to mobile sources and private residences.)</p>
<p><b>DISPENSING OF GASOLINE/STAGE II VAPOR RECOVERY</b></p>	
<p><b>1-30.</b> Installations that operate a gasoline dispensing facility are required to use a Stage II vapor recovery system (CDEP 22a-174-30(b)(2), (b)(3), and (b)(4)).</p>	<p>Determine if the installation operates a gasoline dispensing facility.</p> <p>Verify that, after 15 November 1993, the installation, operating a dispensing facility which existed or for which construction commenced, on or before 15 November 1990, and that has a monthly throughput of 100,000 gal or more, does not transfer gasoline into a motor vehicle fuel tank unless a properly operating Stage II vapor recovery system is used.</p> <p>Verify that after 15 November 1994, the installation operating a dispensing facility which existed, or for which construction commenced, on or before 15 November 1990, and with a throughput of 10,000 gal or more during any calendar month, does not transfer gasoline into a motor vehicle fuel tank unless a properly operating Stage II vapor recovery system is used.</p> <p>(NOTE: Dispensing facilities constructed between 15 November 1990 and 15 November 1992, were required to have a State II vapor recovery system in use after 15 May 1993.)</p>

<b>COMPLIANCE CATEGORY:</b> <b>CLEAN AIR ACT (CAA)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>1-31.</b> Stage II vapor recovery systems are required to meet specific equipment standards (CDEP 22a-174-30(c)(1) through (c)(4)).</p>	<p>Verify that the installation does not use a Stage II vapor recovery system unless the following specifications are met:</p> <ul style="list-style-type: none"> <li>- the system has been tested and approved by CARB on or before 1 November 1992, or the system has been tested and approved by another state on or before 1 November 1992, using testing methods approved by CARB</li> <li>- the system only has hoses which are coaxial hoses</li> <li>- parts of the system are replaced with new or rebuilt parts only if the new or rebuilt parts were approved on or before 1 November 1992, either by CARB or by another state using testing methods approved by CARB.</li> </ul> <p>Verify that the installation does not modify, remove, replace, add, or otherwise render inoperative any part of a Stage II vapor recovery system so the system is incapable of preventing discharge to the atmosphere of at least 95 percent by weight of gasoline vapors displaced during the dispensing of gasoline.</p> <p>Verify that the Stage II vapor recovery system conforms to the specifications of the National Fire Protection Association Automobile and Marine Service Station Code NFPA 30A as adopted in Section 29-320-2 of the Regulations of Connecticut State Agencies.</p>
<p><b>1-32.</b> Installations are required to employ trained personnel to operate and maintain the Stage II vapor recovery system (CDEP 22a-174-30(d)(1) and (d)(2)).</p>	<p>Verify that the installation requires at least one employee to attend and successfully complete a training session (provided by an equipment manufacturer, supplier, or distributor) in the operation and maintenance of the Stage II vapor recovery system no later than 3 mo after commencement of operation of the system.</p> <p>Verify that the Stage II vapor recovery system is operated in accordance with specifications approved by CARB on or before 1 November 1992.</p>
<p><b>1-33.</b> Installations are required to post operating instructions at dispensing facilities using the Stage II vapor recovery system (CDEP 22a-174-30(d)(3)).</p>	<p>Verify that the installation posts, in a conspicuous location on the upper two-thirds of each gasoline dispenser, operating instructions for dispensing gasoline using the Stage II vapor recovery system, including at least the following information:</p> <ul style="list-style-type: none"> <li>- a clear description of how to correctly dispense gasoline using the Stage II vapor recovery system</li> <li>- a warning not to attempt to continue dispensing gasoline after automatic shutoff of the nozzle</li> <li>- the telephone number of a contact at the Department to whom problems experienced with the Stage II vapor recovery system are to be reported.</li> </ul>



<b>COMPLIANCE CATEGORY:</b> <b>CLEAN AIR ACT (CAA)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<b>MOTOR VEHICLE EMISSIONS</b>  <b>1-34.</b> Installations are required to have the exhaust emissions of motor vehicles inspected annually (State of Connecticut Department of Motor Vehicles, Sec. 14-164c-4(a)).	<p>Verify that any motor vehicle registered in this state and designated a 1968 or later model, which is not within the exempted classes of motor vehicles set forth in Subsection (c) of Section 14-164c of the Connecticut General Statutes (CGS), is inspected annually to determine compliance with the exhaust emission standards defined by the Commissioner of Environmental Protection.</p>

## Appendix 1-1

### Emission Limitations for Particulate Matter From Industrial Processes (CDEP 22a-174-18(e)(1))

Process Weight Rate lb/h	Emission Rate lb/h
50	0.36
100	0.55
500	1.53
1000	2.25
5000	6.34
10,000	9.73
20,000	14.99
60,000	29.60
80,000	31.19
120,000	33.28
160,000	34.85
200,000	36.11
400,000	40.35
1,000,000	46.72



## Appendix 1-2

### Classification of Solvents

(Source: CDEP 22a-174-20(i)(1), (i)(2), and (i)(3))

The following solvents are considered highly photochemically reactive:

1. Group R1: Any hydrocarbons, alcohols, aldehydes, esters, or ketones with an olefinic or cycloolefinic type of unsaturation.
2. Group R2: Any aromatic compounds with eight or more carbon atoms to the molecule, except ethylbenzene, phenyl acetate, and methyl benzoate.
3. Group R3: Any ketones with branched hydrocarbon structures, and ethylbenzene, trichloroethylene, and toluene.

Any solvent mixture will be considered highly photochemically reactive if the composition of such mixture exceeds any of the following limits by volume:

1. 5 percent of any combination of chemical compounds in group R1.
2. 8 percent of any combination of chemical compounds in group R2.
3. 20 percent of any combination of chemical compounds in group R3.
4. 20 percent of any combination of chemical compounds in groups R1, R2, and R3.

NOTE: When any organic solvent or any constituent of any organic solvent is classified from its chemical structure into more than one of the above groups of organic compounds, it is considered a member of the most reactive chemical group, that is, that group having the least allowable percent of the total volume of solvents.



### Appendix 1-3

#### Exempt Volatile Organic Compounds (CDEP 22a-174-1, Table 1(a)-1)

methane  
ethane  
1,1,1 trichloroethane  
methylene-chloride  
trichlorofluoromethane  
dichlorofluoromethane  
chlorodifluoromethane  
trifluoromethane  
trichlorotrifluoroethane  
dichlorotetrafluoroethane  
chloropentafluoroethane  
dichlorotrifluoroethane  
tetrafluoroethane  
dichlorofluoroethane  
chlorodifluoroethane



<b>INSTALLATION:</b>	<b>COMPLIANCE CATEGORY:</b> <b>CLEAN AIR ACT (CAA)</b> <b>Connecticut Supplement</b>	<b>DATE:</b>	<b>REVIEWER(S):</b>
<b>STATUS</b> <b>NA   C   RMA</b>	<b>REVIEWER COMMENTS:</b>		



## **SECTION 2**

### **CLEAN WATER ACT (CWA)**

#### **Connecticut Supplement**

## SECTION 2

### CLEAN WATER ACT (CWA)

#### Connecticut Supplement

#### Definitions

These definitions are taken in part from: Guidelines for the Discharge of Swimming Pool Wastewaters, General Permit for the Discharge of Domestic Sewage, General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities, General Permit for the Discharge of Wastewaters from Minor Boiler Blowdown, Water Discharge Permit Regulations Sec. 22a-430, *Water Pollution Control Act* Sec. 22a-448.

- *Acute Toxicity* - an adverse effect that usually occurs after the introduction of a pollutant. Lethality to an organism is the usual measure of acute toxicity. Where death is not easily detected, immobilization is usually considered equivalent to death.
- *Administrator* - the administrator of the U.S. Environmental Protection Agency (USEPA).
- *Alpha Particle* - a positively charged particle emitted by certain radioactive materials. It is the least penetrating of the three common types of radiation (alpha, beta, and gamma) and usually is not dangerous to plants, animals, or humans.
- *Aliquot Sample* - a grab sample taken for the purpose of combining with other grab samples.
- *Average* - the arithmetic average.
- *Average Daily Concentration* - the average concentration of substance in a daily composite sample.
- *Average Daily Flow* - the average of all total daily flows measured during the calendar month.
- *Average Daily Quantity* - the average quantity of waste generated during the operating day.
- *Average Monthly Discharge* - the highest allowable monthly average discharge over a calendar month, calculated by adding the daily discharges during the calendar month and dividing the sum by the number of daily discharges measured during that month.
- *Average Weekly Discharge* - the highest allowable weekly average discharge over a calendar week, calculated by adding the daily discharges during the calendar week and dividing the sum by the number of daily discharges measured during that week.
- *Aquifer* - a geological formation, group of formations, or part of a formation that is capable of yielding a significant amount of water to a well or spring.
- *Biochemical Oxygen Demand* - the quantity of dissolved oxygen (mg/L) required during stabilization of decomposable organic matter by aerobic biochemical action.
- *Benthic* - refers to organisms or materials associated with the bottom of a watercourse.
- *Bioaccumulate* - the uptake and retention of substances by an organism from its surrounding medium and/or from its food.

- *Bioconcentrate* - the uptake and retention of substances by an organism from its surrounding medium to levels which exceed the concentration of that substance in the medium.
- *Boiler Acid Cleaning Wastewaters* - wastewater and waste acid cleaning solution generated from the use of an acidic cleaning solution to remove scale or other contaminants from a boiler.
- *Boil-Out* - wastewater and waste alkaline cleaning solution generated from hot alkaline cleaning to remove oil and grease, protective coatings, or soil, and performed as maintenance on a boiler or performed on a new boiler prior to operation.
- *Bypass* - the anticipated or unanticipated intentional diversion of waste streams from any portion of a treatment works.
- *Chronic Toxicity* - an adverse effect on aquatic life, such as seduced growth or reproductive success, or poor survival for sensitive life stages caused by long-term exposure to a substance or combination of substances.
- *Coastal and Marine Waters* - Those waters generally subjected to the rise and fall of the tide.
- *Composite Sample* - a sample collected over a specified period of time in order that the results are representative of the monitored activity over the same period.
- *Commissioner* - the Commissioner of the Department of Environmental Protection or his duly authorized representative.
- *Community Sewerage System* - any sewerage system serving one or more residences in separate structures which is not connected to a municipal sewerage system or which is connected to a municipal sewerage system as a distinct and separately managed district or segment of such system.
- *Construction Activities* - activities, including but not limited to, clearing, grading, excavation, and dewatering.
- *Continuous Discharge* - a discharge which occurs without interruption throughout the operating day, except for infrequent stoppages for maintenance.
- *Conventional Pollutants* - Biochemical Oxygen Demand (BOD), oil, grease, total suspended solids, nonfilterable, fecal coliform, pH.
- *Daily Composite* - a composite sample taken over a full operating day consisting of grab samples collected intervals of no more than 60 min and combined proportionally to flow.
- *Department* - the Connecticut Department of Environmental Protection.
- *Dewatering Wastewaters* - uncontaminated wastewaters generated by the pumping of groundwaters during construction or excavation activities.
- *DGW* - a discharge to groundwater.
- *Director* - the Director of the Water Compliance Unit of the Department of Environmental Protection.
- *Discharge* - the emission of any water, substance, or material into waters of the state, whether or not the substance causes pollution.

- **Domestic Sewage** - waste and wastewater from household operations that are discharged to or otherwise enter treatment works.
- **Dredging** - the excavation or removal of sediment, soil, mud, sand, shells, gravel, or other aggregate from any tidal wetland or adjacent area for the direct or indirect purpose of establishing or increasing water depth, increasing the surface or cross-sectional area of a waterway, or obtaining such sediment, soil, mud, sand, gravel, shells, or other aggregate.
- **Effluent Limitation** - any numerical limitation imposed by the commissioner on the quantities, discharge rates, or concentration of any water, substance, or material discharged to the waters of the state.
- **Fecal Coliform** - that portion of the coliform group which is present in the intestinal tracts and feces of warm blooded animals as detected by the product of acid or gas from lactose in a suitable culture medium.
- **General Permit** - an NPDES permit which covers multiple discharges of a point source category within a designated geographic area, in lieu of individual permits being issued to individual dischargers.
- **Geometric Mean** - either the Nth root of a product of N factors or the antilogarithm of the arithmetic means of the logarithms of the individual samples.
- **Grab Sample** - an individual sample collected in less than 15 min.
- **Grab Sample Average** - the arithmetic mean of all grab sample analysis. Grab samples must be collected at least once every 4 h over a full operating day.
- **Groundwater** - water below the land surface in a zone of saturation.
- **Hardness** - a measure of calcium and magnesium salts present in the water, expressed as calcium carbonate.
- **Hydrostatic Pressure Testing** - to fill a pipeline or tank with water and to monitor the pipeline or tank for the purpose of testing structural integrity. Testing may be carried out with or without the application of external pressure to the water in the pipeline or tank.
- **Hydrostatic Pressure Testing Wastewater** - waters used to test the structural integrity of new tanks and pipelines, and tanks and pipelines that have been used to hold or transfer drinking water, sewage, or natural gas.
- **Indigenous** - animal or plant life which are naturally occurring inhabitants of a certain geographic region.
- **Injection** - the subsurface emplacement of fluids by gravity or pressure through a well.
- **Individual Permits** - a permit for a single point source or facility.
- **Injection Well** - a well in which fluids are being injected.
- **Industrial Waste** - the water or liquid carried from industrial or commercial processes, as distinct from domestic wastewater.

- *LC50* - the median lethal concentration of a toxic substance, including an effluent expressed as a statistical estimate of the concentration that is lethal to 50 percent of the test organisms under specified test conditions, based on the results of an acute toxicity test. For the purposes of this section, it includes an EC50, the median effective concentration based on daphnid immobilization.
- *Lentic* - standing water environments, such as lakes and ponds.
- *Lotic* - flowing water habitats, such as in streams and rivers.
- *Listed Substance* - any substance for which analytical results are included in permit application.
- *Maximum Daily Concentration* - the maximum concentration as measured in the daily composite sample or grab sample average.
- *Maximum Daily Flow* - the greatest volume of wastewater to be discharged over an operating day.
- *Maximum Instantaneous Flow* - the maximum flow at any time as measured in gallons per minute.
- *Minor Boiler Blowdown Wastewater* - no more than 5000 gal/day per boiler of wastewater resulting from periodic or continuous bleed off or draining of bottom, bulk, or surface water from a boiler during boiler operation for the purpose of eliminating excess solids from the boiler water, and includes steam condensate from boiler operations but does not include boil-out or boiler acid cleaning wastewaters.
- *Minor Blowdown from Heating and Cooling Equipment* - wastewater generated by heating and cooling equipment that recycles water, provided that the discharge has a maximum daily flow no greater than 500,000 gal/day.
- *Minor Noncontact Cooling Water* - wastewater that has been used for cooling purposes, does not come into direct contact with the product or process, provided that the discharge has a maximum daily flow no greater than 500,000 gal/day.
- *Minor Tumbling and Cleaning of Parts Wastewater* - wastewater generated by processing of only aluminum, titanium, magnesium, uncoated or unfinished steel or stainless steel, or nonmetallic parts, or any combination thereof, for the removal of particulate metal, for surface texturing, or for cleaning, where no acids or cyanides are used are present in the process.
- *Municipal Separate Storm Sewer* - conveyances for stormwater (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels or storm drains) owned or operated by any municipality and discharging directly to surface waters of the state.
- *NPDES* - National Pollutant Discharge Elimination System.
- *NPDES Permit* - a permit authorizing a discharge to the surface waters of the state directly or indirectly by means other than through a publicly owned treatment works (POTW) or the groundwaters.
- *Nonpoint Source* - pollution that enters any waters of the state from any dispersed land- or water-based activities, including, but not limited to, atmospheric deposition, surface water runoff from agricultural lands, urban areas, or forest lands; subsurface or underground sources; or discharges from boats or marine vessels not otherwise regulated under the NPDES program.

- *Oil or Petroleum* - any kind of oil or petroleum in any form including waste oils and distillation products such as fuel oil, kerosene, naptha, gasoline and benzene, or their vapors.
- *pH* - the negative logarithm of the hydrogen ion concentration.
- *Pollutant* - any water, substance, or material for which the permit in question specifies an effluent limitation.
- *Pollution* - contamination or other alteration of the physical, chemical or biological properties of any water of the state, including change in temperature, taste, color, turbidity, or odor of the water, or such discharge of any liquid, gaseous, solid, radioactive, or other substance into the waters of the state as will or is likely to create a nuisance or make the waters harmful, detrimental, or injurious to public health.
- *Potable Water System Flushing Wastewater* - wastewater generated by the periodic flushing of potable water systems using uncontaminated water.
- *Privately Owned Treatment Works* - a system which is not a POTW and which collects, treats, and/or disposes of nondomestic sewage.
- *Process Wastewater* - and wastewater which, during manufacturing, commercial, mining or silver culture activities, comes into direct contact with, or results from the production, use, or handling of any process, raw material or intermediate or final product, byproduct or waste product. This does not include noncontact cooling water, domestic sewage, stormwater, or agricultural runoff.
- *Publicly Owned Treatment Works (POTW)* - any device or system used in the treatment (including recycling and reclamation) of municipal sewage or industrial wastes of a liquid nature that is owned by a state or municipality.
- *Spill* - any unauthorized discharge of oil or other hazardous substance into the waters of the state.
- *Stormwater* - water consisting of precipitation runoff.
- *Surface Waters* - all waters that are not groundwaters.
- *Swimming Pool Cleaning Wastewaters* - wastewaters and any liquids generated by the acid cleaning of the sidewalls of swimming pools.
- *Swimming Pool Draining Wastewater* - wastewaters generated by the draining of water from swimming pools, but does not include the swimming pool cleaning wastewaters.
- *Swimming Pool Backwash Wastewaters* - wastewaters generated by backwashing a swimming pool filtering system.
- *Toxic Substances* - any substance that can adversely effect the survival, growth, or reproduction of life exposed to the substance either by direct or indirect contact.
- *Turbidity* - the clarity of the water expressed in nephelometric turbidity units (NTU) and measured with a calibrated tubidimeter.

- *Waste Oil* - oil having a flash point at or above 140 °F (60 °C) that is no longer suitable for the services for which it was manufactured due to the presence of impurities or a loss of original properties, including crude oil, fuel oil, lubricating oil, kerosene diesel fuels, cutting oil, emulsions, hydraulic oils, polychlorinated biphenyls and other halogenated oils that have been discarded as waste or are recovered from oil separators, oil spills, tank bottoms or other sources.
- *Waters of the State* - all lakes, streams, rivers, ponds, inland waters, groundwaters, salt waters, and all other waters and water courses within the jurisdiction of the State of Connecticut.
- *Water Quality* - a statement of the physical, chemical, and biological characteristics of surface or groundwater.
- *Water Quality Standards* - provisions of the state and Federal law which consists of designated use or uses for the states, water and water quality criteria which will support those uses.
- *Zone of Influence* - the spatial area or volume of receiving water within which some degradation of water quality or use impairment is anticipated to occur as the result of a pollutant discharge.

# CLEAN WATER ACT (CWA)

## GUIDANCE FOR CONNECTICUT CHECKLIST USERS

Applicability:	Refer to Checklist Items:
Oil Discharges	2-1
Discharges to POTW	2-2
Discharge Permits	2-3 through 2-12
Discharge Treatment Standards	2-13 and 2-14
General Permits	2-15
Discharge of Domestic Sewage	2-16
Discharge of Stormwaters from Construction Activities	2-17 and 2-18
Discharge of Stormwaters Associated with Industrial Activities	2-19 through 2-24
Minor Boiler Blowdown Wastewaters	2-25 through 2-29
Minor Tumbling and Cleansing of Parts Wastewater	2-30 through 2-35
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Surface Water Quality Standards	2-45 through 2-47
Groundwater Quality Standards	2-48
Underground Injection	2-49
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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>OIL DISCHARGES</b></p> <p><b>2-1.</b> Installations must meet notification requirements for the discharge of oil (Connecticut General Statutes (CGS), <i>Water Pollution Control Act</i>, Chapter 466k, Section 22a-450).</p>	<p>Verify that the Commissioner is notified, via the state police, of any discharge, spillage, uncontrolled loss, seepage, or filtration of oil or petroleum.</p> <p>Verify that the report to the Commissioner contains the following:</p> <ul style="list-style-type: none"> <li>- the location</li> <li>- the quantity and type of material or waste</li> <li>- the date and cause of the discharge</li> <li>- the name and address of the owner.</li> </ul>
<p><b>DISCHARGES TO POTWs</b></p> <p><b>2-2.</b> Installations are restricted from discharging certain substances to POTW (State of Connecticut Regulation of Environmental Protection, Water Discharge Permit Regulations (WDPR), Section 22a-430-4(t)).</p>	<p>Verify that the installation does not discharge any substance to a POTW that could cause or threaten, either singly or in combination with other discharges, any of the following:</p> <ul style="list-style-type: none"> <li>- interference with or adversely effect the operation of the POTW</li> <li>- interference with or adversely effect the POTW handling, use or disposal of sludge</li> <li>- cause the POTW to exceed its influent design loading parameters</li> <li>- cause the POTW to violate its permit</li> <li>- cause a worsening of any condition in violation of the POTW's influent design loading parameters</li> <li>- pass through of any substances into the receiving waters that would cause or threaten pollution.</li> </ul> <p>Verify that the installation discharges to a POTW do not contain the following:</p> <ul style="list-style-type: none"> <li>- any substance that could cause or threaten a fire or explosion hazard to the POTW</li> <li>- any substance that could cause or threaten corrosive structural damage to the POTW</li> <li>- any substance with a pH less than 5.0, unless the POTW is designed to accommodate the discharge</li> <li>- any solid or viscous waste in amounts that could cause or threaten to obstruct the sewers</li> <li>- heat in amounts that the temperature of the POTW influent exceeds 104 °F, unless the POTW is designed to accommodate such heat.</li> </ul>



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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>2-4. (continued)</b></p>	<p>Verify that installations that make a significant change to a collection or treatment facility or the operation methods for the purpose of correcting or avoiding a permit violation have notified the Director as follows:</p> <ul style="list-style-type: none"> <li>- within 2 h of making the change or at the start of the next business day if the change is made outside of normal business hours</li> <li>- submit a written report within 30 days.</li> </ul>
<p><b>2-5. Installations with a permitted discharge must meet operation and maintenance standards (WDP, Section 22a-430-3(f), (g), (h), and (o)).</b></p>	<p>Verify that the installation at all times properly operates and maintains all facilities and systems for wastewater collection, storage, treatment, and control.</p> <p>Verify that installations required to develop an operation and maintenance manual have included the following information in the manual:</p> <ul style="list-style-type: none"> <li>- a plan for operational monitoring and inspection</li> <li>- instrument calibration frequency</li> <li>- inventory of necessary chemicals, equipment, and spare parts</li> <li>- a plan for preventive maintenance</li> <li>- operating instructions</li> <li>- housekeeping</li> <li>- security measures.</li> </ul> <p>Verify that the installation disposes of screenings, sludges, chemicals, oils, and any solid or liquid waste resulting from wastewater treatment processes at locations approved by the commissioner or by means of a licensed waste hauler.</p> <p>Verify that the installation takes all reasonable steps to minimize or prevent any discharge which could violate the permit or adversely affect human health or the environment.</p> <p>Verify that the installation implements and maintains practices and/or facilities which result in the minimum amount of wastewater discharged including:</p> <ul style="list-style-type: none"> <li>- water conservation</li> <li>- resource recovery</li> <li>- waste recycling</li> <li>- wastewater reuse</li> <li>- material or product substitution.</li> </ul> <p>Verify that the installation does not use excessive water or the addition of water to dilute an effluent so permit limitations or conditions are met.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>2-6.</b> Installations with a permitted discharge must meet monitoring and monitoring equipment standards (WDPR, Section 22a-430-3(j)(3), (j)(5), (j)(6), and (j)(8)).</p>	<p>Verify that the installation conducts acute and chronic toxicity monitoring at the frequency specified in the permit or at least quarterly.</p> <p>Verify that installations with NPDES permits, monitor each outfall at least annually for each pollutant with the following exceptions:</p> <ul style="list-style-type: none"> <li>- discharges covered by a general permit</li> <li>- installations that have a solvent management plan for total toxic organics.</li> </ul> <p>Verify that, if the installation monitors discharges more frequently than required by the permit, the results are included in the calculation and reporting of the data in the monitoring report.</p> <p>Verify that the installation uses daily composite sampling for all sampling unless otherwise specified in the permit.</p> <p>Verify that all required monitoring equipment is maintained in accordance with the manufacturer's recommendations and specifications and promptly repaired.</p> <p>Verify that permitted installations perform the following when monitoring equipment fails or malfunctions:</p> <ul style="list-style-type: none"> <li>- the equipment is promptly repaired</li> <li>- the Director is notified within 2 h or at the start of the next business day if the occurrence is outside normal business hours</li> <li>- employ other equipment or methods as determined by the Director to meet the terms and conditions of the permit</li> <li>- submit a written report to the Director within 5 days.</li> </ul> <p><b>2-7.</b> Installations with permitted wastewater treatment systems must meet instrumentation standards (WDPR, Section 22a-430-3(q)).</p> <p>Verify that process wastewater treatment systems have instrumentation with audible and visual alarms to automatically and continuously indicate, record, and/or control those function of the system and characteristics of the discharge deemed necessary by the Commissioner.</p> <p>Verify that any condition setting off an alarm was immediately corrected or the discharge was stopped until the correction was made.</p> <p>Verify that treatment facilities, except for batch facilities and those discharging to groundwater (unless required by the Commissioner), have instrumentation to make accurate measurements and recordings of the volume of wastewater discharged per day at any time.</p> <p><b>2-8.</b> Installations with a permitted discharge must meet recordkeeping standards (WDPR, Section 22a-430-3(j)(9)).</p> <p>Verify that the installation retains copies of all reports required by the permit and records of all data used to complete the permit application for a period of at least 5 y from the date of the report or application.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<b>2-8. (continued)</b>	<p>Verify that maintained records include the following:</p> <ul style="list-style-type: none"> <li>- the mass or other measurement specified in the permit for each pollutant or substance</li> <li>- the total flow for each discharge for each day of discharge and other flow measurements specified in the permit for each discharge</li> <li>- the date, exact place, and time of sampling</li> <li>- the dates on which analyses were performed</li> <li>- who performed the analyses</li> <li>- the analytical techniques/methods used</li> <li>- the analyses results</li> <li>- frequency and duration for noncontinuous discharges</li> <li>- production information</li> <li>- all calibration and maintenance records and original strip chart recordings for continuous monitoring, recording, or controlling instrumentation related to the wastewater treatment system</li> <li>- any other information specified in the permit.</li> </ul>
<b>2-9.</b> Installations with a permitted discharge must meet reporting standards (WDP, Section 22a-430-3(j)(9)(C), (j)(10)(A), and (j)(11)(A)).	<p>Verify that, if an installations becomes aware that any information submitted in compliance with a permit was erroneous or omitted, the Commissioner is notified within 72 h and the correct information is submitted in writing within 30 days.</p> <p>Verify that installations with a NPDES permitted discharge submit a discharge toxicity evaluation quarterly, unless directed otherwise by the Commissioner.</p> <p>Verify that all monitoring reports are submitted to the Director in compliance with the terms and conditions of the permit.</p> <p>Verify that permitted installations which discharge to a POTW submit copies of the monitoring report to the appropriate authority which oversees the operation of the POTW.</p>
<b>2-10.</b> Installations with permitted discharges that become aware of any actual or anticipated non-compliance must meet notification standards (WDP, Section 22a-430-3(j)(11)(D) and (j)(11)(E)).	<p>Determine if the installation has become aware of any actual or anticipated noncompliance.</p> <p>Verify that the installation notifies the Director within 2 h of becoming aware of the following circumstances, or at the start of the next business day if the occurrence is not during normal business hours:</p> <ul style="list-style-type: none"> <li>- the noncompliance is greater than two times the permitted level, except for any violations of any maximum daily limitations in an NPDES permit</li> <li>- the conditions may endanger human health, the environment, or the operation of the POTW, including sludge handling and disposal.</li> </ul>

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<b>2-10. (continued)</b>	<p>Verify that the installation submits a written report within 5 days of the noncompliance with the terms and conditions of the permit containing the following information:</p> <ul style="list-style-type: none"> <li>- a description of the noncompliance and its cause</li> <li>- the period of noncompliance, including dates and times</li> <li>- if the noncompliance is not corrected, the anticipated length of time it is expected to continue</li> <li>- the steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.</li> </ul> <p>Verify that the Director is notified within 72 h and in writing within 30 days of any permit-specified toxic substance that exceeds permitted levels or exceeds the highest of the following levels:</p> <ul style="list-style-type: none"> <li>- 100 µg/L</li> <li>- 200 µg/L for acrolein and acrylonitrile</li> <li>- 500 µg/L for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol</li> <li>- 1 mg/L for antimony</li> <li>- a level two times the level specified in the permit application</li> <li>- any alternative level specified by the Commissioner.</li> </ul>
<b>2-11. Installations with permitted discharges must meet spill prevention and control standards (W DPR, Section 22a-430-3(p)).</b>	<p>Verify that the installation maintains practices, procedures, and facilities designed to prevent, minimize, and control spills, leaks, or unplanned releases of toxic, hazardous substances, or other Commissioner-specified substances to prevent the polluting of the waters of the state.</p> <p>(NOTE: Spill prevention requirements do not apply to facilities already covered under RCRA and the Spill Prevention Control and Countermeasure (SPCC) program.)</p>
<b>2-12. Installations with permitted discharges that experience a bypass must take specific actions (W DPR, Section 22a-430-3(k)).</b>	<p>Determine if the installation has had a bypass of the collection system or treatment facilities, or any part thereof.</p> <p>Verify that the installation received prior approval for the bypass from the Commissioner or the bypass was:</p> <ul style="list-style-type: none"> <li>- unanticipated, unavoidable, necessary to prevent loss of life, personal injury or severe property damage, and there was no feasible alternative to the bypass including <ul style="list-style-type: none"> <li>- use of auxiliary or backup treatment facilities</li> <li>- retention of untreated wastes</li> <li>- stopping the discharges</li> <li>- maintenance during normal periods of equipment downtime.</li> </ul> </li> </ul> <p>Verify that, if a bypass is necessary, the installation minimizes or halts production and/or all discharges until the facility is restored or an alternative method of treatment is provided.</p>

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<p><b>2-12. (continued)</b></p> <p><b>DISCHARGE TREATMENT STANDARDS</b></p> <p><b>2-13.</b> Permitted installations with metal finishing facilities must meet specific discharge treatment standards (WDPR, Section 22a-430-4(s)(1) and (2)).</p> <p><b>2-14.</b> Installations with specific categories of discharges must meet minimum levels of treatment (WDPR, Section 22a-430-4(s)(3)).</p>	<p>Verify that installations with an unanticipated bypass do the following:</p> <ul style="list-style-type: none"> <li>- notify the Director within 2 h of becoming aware of the condition</li> <li>- submit a written report within 5 days.</li> </ul> <p>Verify that installations using an alternative collection and treatment or pretreatment scheme to prevent a bypass have performed the following notification and recordkeeping:</p> <ul style="list-style-type: none"> <li>- notified the Director not less than 24 h prior to the use of the alternative scheme</li> <li>- monitor and record the quality and quantity of the discharge in accordance with the permit or an approved alternative schedule</li> <li>- the monitoring is submitted with the next monitoring report and not used to meet routine scheduled monitoring report requirements.</li> </ul> <p>Verify that process wastewater discharges from metal finishing operations meet the allowable effluent concentrations listed in Appendix 2-1.</p> <p>(NOTE: Metal finishing discharges include, but are not limited to, non-ferrous metals manufacturing discharges, iron and steel manufacturing discharges, electrical and electronic component discharges, aluminum forming discharges, battery manufacturing discharges, coil coating discharges, copper forming discharges and metal molding and casting discharges.)</p> <p>Verify that installation with the following categories of discharges meet the associated minimum levels of treatment, subject to the approval of the Commissioner:</p> <ul style="list-style-type: none"> <li>- minor photographic processing wastewaters, silver recovery</li> <li>- groundwater contamination recovery system wastewaters from <ul style="list-style-type: none"> <li>- oil recovery operations, gravity separation and skimming of floatable materials in a tank with a retention time of at least 6 h</li> <li>- gasoline recovery operations, aeration or carbon adsorption</li> </ul> </li> <li>- vehicle service drains and vehicle washing facilities, gravity separation and skimming in a tank with a capacity of 1000 gal or a retention time of at least 24-h at the average daily flow which ever is greater</li> <li>- minor tumbling and cleaning of parts wastewaters, gravity separation in a tank with a retention time of at least 24 h at average daily flow</li> <li>- furniture refinishing rinsewaters, neutralization if acids are used in the process and solid removal by gravity separation or filtration</li> </ul>



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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>2-14. (continued)</b></p> <p><b>GENERAL PERMITS</b></p> <p><b>2-15.</b> Installations with discharges covered by general permits must meet specific individual permit requirements (General Permit for the Discharge of Domestic Sewage (GPDDS), Part VII).</p> <p><b>Discharge of Domestic Sewage</b></p> <p><b>2-16.</b> Installations with discharges comprised only of domestic sewage must meet specific standards to be covered by a general permit (GPDDS, Part IV and V).</p>	<ul style="list-style-type: none"> <li>- transfer station floor drains, gravity separation and skimming of floatable materials</li> <li>- incineration scrubber wastewaters, neutralization to a pH of 6.0 to 10.0, and gravity settling</li> <li>- carpet and upholstery cleaners, removal of lint through filtration.</li> </ul> <p>Determine if the installation has a discharge covered by a general permit.</p> <p>Verify that the installation meets the individual discharge permit requirements for the following:</p> <ul style="list-style-type: none"> <li>- equipment operation and maintenance</li> <li>- sludge disposal</li> <li>- facility modification</li> <li>- monitoring</li> <li>- recordkeeping and reporting</li> <li>- bypass</li> <li>- effluent limitations</li> <li>- resource conservation</li> <li>- spill prevention and control</li> <li>- instrumentation.</li> </ul> <p>Determine if the installation has a discharge comprised only of domestic sewage and covered by a general permit.</p> <p>Verify that the installation and sewage discharge meet the following conditions:</p> <ul style="list-style-type: none"> <li>- the discharge is not covered by a valid individual permit</li> <li>- all of the discharge of domestic sewage is discharged to a POTW</li> <li>- any pump station used to convey the discharge from a community sewerage system to the POTW is owned and operated by a municipality</li> <li>- does not violate any new connection prohibitions issued by the Commissioner.</li> </ul> <p>Verify that installations with domestic sewage discharges that have an average daily flow greater than 50,000 gpd or greater than 5 percent of the design flow of the receiving POTW, whichever is less, have registered for a general permit.</p> <p>Verify that the installation does not discharge any water, substance, or material into the waters of the state other than those specified by the general permit without obtaining an individual permit.</p>

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<p><b>2-16. (continued)</b></p> <p><b>Discharge of Stormwaters from Construction Activities</b></p> <p><b>2-17.</b> Installations with discharges comprised solely of stormwater and dewatering wastewaters from construction activities must meet specific standards to be covered by a general permit (General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (GPDSDWCA), Part IV(A), (C), Part V(A) and (H)).</p>	<p>Verify that the terms and conditions of the permit are met.</p> <p>(NOTE: This permit expires 11 June 2002.)</p> <p>Determine if the installation has discharges that meet the following requirements:</p> <ul style="list-style-type: none"> <li>- comprised solely of stormwater and dewatering wastewater</li> <li>- discharges from construction activities that disturb 5 or more total acres</li> <li>- discharge is covered by a general permit.</li> </ul> <p>Verify that the installation and the discharge meet the following conditions:</p> <ul style="list-style-type: none"> <li>- the discharge is not covered by an individual permit</li> <li>- stormwater is not discharged to a POTW or to groundwater</li> <li>- the discharge does not cause pollution due to acute or chronic toxicity to aquatic and marine life, impair the biological integrity of aquatic or marine ecosystems, or results in an unacceptable risk to human health.</li> </ul> <p>Verify that the installation has submitted to the Commissioner a registration either:</p> <ul style="list-style-type: none"> <li>- 30 days after the issuance of the permit if the discharge was initiated, created, originated, or maintained on or before 1 October 1992</li> <li>- at least 15 days before the initiation of construction activities for any other discharge.</li> </ul> <p>Verify that sites covered by a general permit for stormwater discharges through a municipal separate storm sewer system from construction activities submit a copy of the registration to the municipal sewer system.</p> <p>Verify that the terms and conditions of the permit are met.</p> <p>(NOTE: This general permit expires on 1 October 1997.)</p> <p>(NOTE: Installations that discharge stormwater or dewatering wastewaters from construction activity into coastal tidal waters, which requires a permit under the <i>Structures and Dredging Act</i> or the <i>Tidal Wetlands Act</i>, must obtain such a permit.)</p>

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<p><b>2-18.</b> Installations with general permitted stormwater discharges associated with construction activities must meet stormwater pollution control plan standards (GPDSDWCA, Part VI(B)(1) and (2)).</p> <p><b>Discharge of Stormwaters Associated With Industrial Activities</b></p> <p><b>2-19.</b> Installations with discharges comprised solely of stormwater associated with industrial activity must meet specific standards to be covered by a general permit (General Permit for the Discharge of Stormwater Associated with Industrial Activity (GPDSAIA), Part IV(A), (C), Part V(A), and Part VI (A)(2)).</p>	<p>Verify that the installation develops and implements a stormwater pollution control plan for each site covered by the general permit.</p> <p>Verify that the stormwater pollution control plan includes the following:</p> <ul style="list-style-type: none"> <li>- pollution caused by soil erosion and sedimentation during and after construction</li> <li>- stormwater pollution caused by use of the site after construction is completed, including but not limited to, parking lots, roadways, and the maintenance of grassed areas.</li> </ul> <p>Verify that the stormwater pollution control plan is prepared in accordance with good engineering practices.</p> <p>Verify that the plan is prepared as follows:</p> <ul style="list-style-type: none"> <li>- no later than 30 days after the issuance of the general permit for construction activities that were initiated on or before 1 October 1992</li> <li>- no later than 15 days before the initiation of construction activity for construction activities that were initiated after 1 October 1992.</li> </ul> <p>Verify that the plan is amended if there is a change in contractor or subcontractor at the site, or if there is a change in design, construction, operation, or maintenance at the site that has the potential for the discharge of pollutants to the water of the state.</p> <p>Determine if the installation has discharges comprised solely of stormwater associated with industrial activity and covered by a general permit.</p> <p>Verify that the installation and the discharge meet the following conditions:</p> <ul style="list-style-type: none"> <li>- the discharge is not covered by an individual permit</li> <li>- the stormwater is not discharged to a POTW or to groundwater</li> <li>- the stormwater is discharged from a point source directly related to manufacturing, processing, or raw material storage areas at an industrial plant</li> <li>- stormwater is not discharged from an industrial activity owned by a municipality with a 1990 census population of less than 100,000 unless the stormwater discharge is from municipally owned airports, power plants, and uncontrolled landfills.</li> </ul>

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REGULATORY REQUIREMENTS:	REVIEWER CHECKS:
<p><b>2-19. (continued)</b></p>	<p>Verify that the installation has submitted to the Commissioner a registration either:</p> <ul style="list-style-type: none"> <li>- 60 days after the issuance of the permit if the discharge was initiated, created, originated, or maintained on or before the issuance of the permit</li> <li>- no later than the date the industrial activity is initiated for any other discharge.</li> </ul> <p>Verify that the terms and conditions of the permit are met.</p> <p>(NOTE: This general permit expires 1 October 1997.)</p> <p>(NOTE: Installations that discharge stormwater into coastal tidal waters, which require a permit under the <i>Structures and Dredging Act</i> or the <i>Tidal Wetlands Act</i>, must obtain such a permit.)</p>
<p><b>2-20.</b> Installations with general permits for stormwater discharges associated with industrial activities must meet specific design standards (GPDSAIA, Part VI(A)(1)).</p>	<p>Verify that installations discharging stormwater associated with industrial activity 100 ft or less from tidal wetlands, which are not fresh-tidal wetlands, discharge the stormwater through a system designed to store the volume or stormwater runoff generated by a 1 in. rainfall on the site.</p>
<p><b>2-21.</b> Installations with general permits for stormwater discharges associated with industrial activities must meet specific stormwater pollution prevention plan standards (GPDSAIA, Part VI(B)(1), (B)(2), (B)(4), and (B)(5)).</p>	<p>Verify that the installation develops and implements a stormwater pollution prevention plan for each site.</p> <p>Verify that the stormwater pollution control plan is prepared in accordance with good engineering practices.</p> <p>Verify that the plan for installations with stormwater discharges initiated, created, originated, or maintained on or before the date the permit was issued is:</p> <ul style="list-style-type: none"> <li>- completed within 180 days of the general permit issuance</li> <li>- implement as soon as possible, but no later than 365 days after issuance of the permit.</li> </ul> <p>Verify that installations with discharges initiated after the permit was issued have implemented the plan as soon as possible, but no later than 60 days after the industrial activity was initiated.</p> <p>Verify that the plan is amended when:</p> <ul style="list-style-type: none"> <li>- there is a change at the site that has an effect on the potential to cause pollution of the waters of the state</li> <li>- the actions required by the plan fail to ensure or adequately protect against pollution of the waters of the state.</li> </ul>

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<b>2-21. (continued)</b>	<p>Verify that the plan includes:</p> <ul style="list-style-type: none"> <li>- identification of pollution prevention teams</li> <li>- description of potential pollutant sources, including a drainage map, an inventory of exposed materials, a list of spills and leaks that could affect stormwater, and a monitoring program</li> <li>- stormwater management controls including maintenance, spill prevention, inspections, training, and erosion and runoff control</li> <li>- comprehensive site compliance evaluation.</li> </ul> <p>Verify that additionally the plan for stormwater discharges associated with industrial activity through municipal separate storm sewer systems serving a population of 100,000 more meet applicable requirements of the municipal stormwater management programs in the NPDES permits.</p>
<b>2-22.</b> Installations with general permits for stormwater discharges associated with industrial activities must meet specific monitoring standards (GPDSAIA, Part VI(C)(1) and (C)(2)).	<p>Verify that stormwater is monitored no later than 365 days after the issuance of the permit and annually thereafter for the following pollutants:</p> <ul style="list-style-type: none"> <li>- total oil and grease</li> <li>- pH</li> <li>- chemical oxygen demand (COD)</li> <li>- total suspended solids (TSS)</li> <li>- total phosphorous</li> <li>- total kjeldahl nitrogen</li> <li>- nitrate as nitrogen</li> <li>- fecal coliforms</li> <li>- total copper</li> <li>- total zinc</li> <li>- total lead</li> <li>- other pollutants required to be monitored by the Commissioner.</li> </ul> <p>Verify that annual samples are collected from discharges resulting from a storm event greater than 0.1 in. in magnitude which occurs at least 72 h after any previous storm event of 0.1 in. or greater.</p> <p>Verify that annual samples of storm events are grab samples collected during the first 30 min of a storm event discharge.</p> <p>Verify that the following information is maintained for monitored storm events:</p> <ul style="list-style-type: none"> <li>- the date, temperature, time of discharge start, time of sampling, and magnitude of the storm event sampled</li> <li>- the duration between the storm event sampled and the end of the previous measurable storm event.</li> </ul> <p>Verify that the following information is recorded for each measurement or sample taken:</p> <ul style="list-style-type: none"> <li>- the place, date, and time of sampling</li> <li>- the person(s) collecting samples</li> <li>- the dates and times the analyses were initiated</li> </ul>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>2-22. (continued)</b></p>	<ul style="list-style-type: none"> <li>- the person(s) performing the analyses</li> <li>- the analytical techniques or methods used</li> <li>- the analyses results.</li> </ul> <p>Verify that all records and information resulting from the monitoring activities required by this general permit are maintained for a minimum of 5 yr following the expiration of the general permit.</p>
<p><b>2-23.</b> Installations with general permits for stormwater discharges associated with industrial activities must meet specific reporting standards (GPDSAIA, Part VI(C)(3)).</p>	<p>Verify that all stormwater monitoring results are retained on site.</p> <p>Verify that installations with any acute toxicity biomonitoring test with a greater than 50 percent mortality to either test species as a result of exposure to undiluted stormwater have submitted a report to the Commissioner within 90 days.</p>
<p><b>2-24.</b> Stormwater discharges associated with industrial activities covered by a general permit must meet safety and health standards (GPDSAIA, Part VI(D)).</p>	<p>Verify that no distinctly floating scum, oil, or other matter is contained in the stormwater discharge with the exception of naturally occurring substances.</p> <p>Verify that the stormwater discharge does not result in pollution due to acute or chronic toxicity to aquatic and marine life, impair the biological integrity of aquatic or marine ecosystems, or result in an unacceptable risk to human health.</p>
<p><b>Minor Boiler Blowdown Wastewaters</b></p>	
<p><b>2-25.</b> Installations with discharges comprised solely of minor boiler blowdown wastewater must meet specific standards to be covered by a general permit (General Permit for the Discharge of Wastewaters from Minor Boiler Blowdown (GPDWMBB), Part IV and Part VI(D)).</p>	<p>Determine if the installation has a discharge comprised solely of minor boiler blowdown wastewater and covered by a general permit.</p> <p>Verify that the installation and the discharge meet the following standards:</p> <ul style="list-style-type: none"> <li>- the discharge is not covered by a valid individual permit</li> <li>- discharges with chemicals added are discharged to a POTW</li> <li>- discharges with no chemicals added are discharged to a POTW or to groundwaters which have a groundwater classification of GA or GB</li> <li>- chemical additives used in the boiler do not contain any listed toxic or hazardous substances</li> <li>- the maximum daily flow of all discharges does not exceed 5000 gal per day per boiler.</li> </ul> <p>Verify that the terms and conditions of the permit are met.</p> <p>(NOTE: This permit does not cover boil-out and boiler acid wastewaters.)</p> <p>(NOTE: This permit expires on 11 June 2002.)</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>2-26.</b> Installations with discharges comprised solely of minor boiler blowdown wastewater and covered by a general permit must meet safety standards (GPDWMBB, Part VI(A) through (C)).</p>	<p>Verify that the discharge is totally enclosed in piping from the boiler to a POTW or building sanitary sewer connected to a POTW.</p> <p>Verify that there are no floor drains on the same site as the boiler, unless the drain is authorized under the general permit.</p> <p>Verify that chemicals used for boiler treatment stored on the same site as the boiler are stored either inside a building or meet the following conditions for storage outside:</p> <ul style="list-style-type: none"> <li>- chemicals contained within a dike or other barrier impervious to the materials being contained</li> <li>- supported by a base impervious to the material being stored</li> <li>- covered by a permanent structure which prevents the entry of precipitation</li> <li>- capable of holding without leaking or structural failure, 110 percent of the entire volume of the largest container within the area or dike.</li> </ul>
<p><b>2-27.</b> Installations with discharges comprised solely of minor boiler blowdown wastewater and covered by a general permit must meet effluent monitoring standards (GPDWMBB, Part VII and VIII).</p>	<p>Verify that the effluent does not exceed the following maximum concentrations levels:</p> <ul style="list-style-type: none"> <li>- copper, 1 mg/L</li> <li>- lead, 0.1 mg/L</li> <li>- pH, not less than 6.0 or greater than 12.0</li> <li>- temperature of the discharge at the first manhole after leaving the site, 150°F</li> <li>- not cause the temperature of the influent at the headworks of the sewage treatment plant to exceed 104°F.</li> </ul> <p>Verify that installations with minor boiler blowdown from a boiler to which chemicals are added are sampled and analyzed annually for the following parameters:</p> <ul style="list-style-type: none"> <li>- copper</li> <li>- lead</li> <li>- pH</li> <li>- temperature.</li> </ul> <p>(NOTE: Monitoring is not required for minor boiler blowdown from a boiler to which no chemicals are added.)</p> <p>Verify that all wastewater samples are comprised only of minor boiler blowdown wastewaters and are taken prior to combination with wastewaters of any other type.</p> <p>Verify that separate grab samples are taken for each boiler and are representative of the discharge during standard operation conditions.</p> <p>Verify that all analytical results are retained at the facility.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>2-28.</b> Installations with discharges comprised solely of minor boiler blowdown wastewater and covered by a general permit must meet record-keeping standards for violations of the permit (GPDWMBB, Part IX(A)).</p>	<p>Verify that the installation records the following information in a log within 24 h of receiving analytical results, monitoring data, or any other information that indicates a violation of the general permit:</p> <ul style="list-style-type: none"> <li>- the condition(s) or effluent limitation(s) violated</li> <li>- the analytical results and information demonstrating the violation(s)</li> <li>- the cause of the violation(s)</li> <li>- the period of noncompliance</li> <li>- the anticipated time the noncompliance is expected to continue and, upon correction, the date and time of correction</li> <li>- steps taken and planned to reduce, eliminate, and prevent a recurrence of the noncompliance, and the dates such steps are executed</li> <li>- the name and title of the person recording the information</li> <li>- the date and time of the information recording.</li> </ul>
<p><b>2-29.</b> Installations with discharges comprised solely of minor boiler blowdown wastewater and covered by a general permit must meet reporting standards for violations of the permit (GPDWMBB, Part IX(B)).</p>	<p>Verify that installations submit a report to the Commissioner within 20 days of any of the following occurrences:</p> <ul style="list-style-type: none"> <li>- three simultaneous or consecutive violations of the same or different conditions of the general permit</li> <li>- four violations of the same or different conditions of the general permit in any consecutive 12-mo period</li> <li>- the exceedance of any effluent limitation, other than that for pH, by more than 200 percent and for pH by more than one standard unit.</li> </ul> <p>Verify that installations discharging to a POTW submit a copy of the report to the POTW receiving the discharge.</p> <p>Verify that, within 60 days after the deadline for submitting the report, the installation submits a certification signed by an independent professional engineer.</p> <p>Verify that the report and the certification are prepared by an independent professional engineer not in the regular employ of the permittee.</p>



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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>Minor Tumbling and Cleaning of Parts Wastewater</b></p> <p><b>2-30.</b> Installations with discharges that are comprised solely of minor tumbling and cleaning of parts wastewater must meet the terms and conditions of the general permit (General Permit for the Discharge of Minor Tumbling and Cleaning of Parts Wastewater (GPDMTCPW) Part IV (A)).</p> <p><b>2-31.</b> Installations with minor tumbling and cleaning of parts wastewater discharges covered by a general permit must meet treatment standards (GPDMTCPW, Part VI).</p>	<p>Determine if the installation has discharges that are comprised solely of minor tumbling and cleaning of parts wastewater.</p> <p>Verify that the terms and conditions of the permit are met.</p> <p>(NOTE: This permit expires 11 June 2002.)</p> <p>(NOTE: Installations must submit a notice of intent to be covered to register for coverage under this general permit.)</p> <p>Verify that solids which are capable of settling are removed from all tumbling and cleaning of parts wastewaters by utilizing settling, centrifuging, or filtration or a combination of these or other techniques.</p> <p>Verify that each settling tank meets the following standards:</p> <ul style="list-style-type: none"> <li>- provides a minimum of 1 h of detention time at the maximum instantaneous flow to the system, unless more than one tank is used; then at least one tank must meet the 1 h detention time requirement</li> <li>- prevent short circuiting of flow or displacement of accumulated tank solids</li> <li>- have a submerged outlet to allow for retention of floatable materials.</li> </ul>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>2-32.</b> Installations with minor tumbling and cleaning of parts wastewater discharges covered by a general permit must meet effluent limitation standards (GPDMTCPW, Part VII).</p>	<p>Verify that the following effluent limitations are not exceeded:</p> <ul style="list-style-type: none"> <li>- cadmium, 0.1 mg/L</li> <li>- total chromium, 1mg/L</li> <li>- copper, 1 mg/L</li> <li>- lead, 0.1 mg/L</li> <li>- nickel, 1 mg/L</li> <li>- zinc, 1 mg/L</li> <li>- oil and grease hydrocarbon, 50 mg/L</li> <li>- settleable solids, 5 mg/L.</li> </ul> <p>Verify that the pH of the discharge is not less than 6.0 nor greater than 11.0.</p> <p>Verify that the temperature of the discharge does not exceed 150°F at the first manhole after leaving the site.</p> <p>Verify that the discharge does not cause the influent at the headworks of the sewage treatment plant to exceed 104°F.</p> <p>Verify that the total daily flow is monitored.</p>
<p><b>2-33.</b> Installations with minor tumbling and cleaning of parts wastewater discharges covered by a general permit must meet monitoring standards (GPDMTCPW, Part VIII).</p>	<p>Verify that all wastewater samples are comprised only of minor tumbling and cleaning of parts wastewater and taken prior to combination with any other wastewater.</p> <p>Verify that each separate discharge pipe is sampled and is representative of the discharge during standard operating conditions.</p> <p>Verify that the following minimum monitoring frequency is met:</p> <ul style="list-style-type: none"> <li>- quarterly monitoring for sites with less than 5000 gpd maximum daily flow</li> <li>- monthly monitoring for sites with at least 5000 gpd and less than or equal to 50,000 gpd maximum daily flow.</li> </ul> <p>Verify that all samples are grab samples.</p> <p>Verify that, for pH, grab samples are taken every 4 h over the entire operating day.</p> <p>Verify that for sites with a maximum daily flow of tumbling and cleaning of parts wastewater greater than 5000 gpd, a flow meter capable of measuring instantaneous and total daily flow is used continuously during all periods of discharge to determine flow rate.</p> <p>Verify that all analytical results are retained at the facility.</p>

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<p><b>2-34.</b> Installations with minor tumbling and cleaning of parts wastewater discharges covered by a general permit must meet recordkeeping standards for violations of the permit (GPDMTCPW, Part IX(A)).</p>	<p>Verify that the installation records the following information in a log within 24 h of receiving analytical results, monitoring data, or any other information that indicates a violation of the general permit:</p> <ul style="list-style-type: none"> <li>- the condition(s) or effluent limitation(s) violated</li> <li>- the analytical results and information demonstrating the violation(s)</li> <li>- the cause of the violation(s)</li> <li>- the period of noncompliance</li> <li>- the anticipated length of time the noncompliance is expected to continue and, upon correction, the date and time of correction</li> <li>- steps taken and planned to reduce, eliminate, and prevent a recurrence of the noncompliance, and the dates such steps are executed</li> <li>- the name and title of the person recording the information</li> <li>- the date and time the information is recorded.</li> </ul>
<p><b>2-35.</b> Installations with minor tumbling and cleaning of parts wastewater discharges covered by a general permit must meet reporting standards for violations of the permit (GPDMTCPW, Part IX(B)).</p>	<p>Verify that installations submit a report to the Commissioner within 20 days of any of the following occurrences:</p> <ul style="list-style-type: none"> <li>- three simultaneous or consecutive violations of the same or different conditions of the general permit</li> <li>- four violations of the same or different conditions of the general permit in any consecutive 12-mo period</li> <li>- the exceedance of any effluent limitation, other than that for pH, by more than 200 percent and for pH by more than one standard unit.</li> </ul> <p>Verify that installations discharging to a POTW submit a copy of the report to the POTW receiving the discharge.</p> <p>Verify that, within 60 days after the deadline for submitting the report, the installation submits a certification signed by an independent professional engineer.</p> <p>Verify that the report and the certification are prepared by an independent professional engineer not in the regular employ of the permittee.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<b>Hydrostatic Pressure Testing Wastewater</b>  <b>2-36.</b> Installations that discharge hydrostatic pressure testing wastewaters must meet specific standards to be covered by a general permit (General Permit for the Discharge of Hydrostatic Pressure Testing Wastewaters (GPDHPTW), Part IV(A), (C), and Part V(A)).	<p>Determine if the installation has discharges of hydrostatic pressure testing wastewaters covered by a general permit.</p> <p>Verify that the installation and the discharge meet the following standards:</p> <ul style="list-style-type: none"> <li>- the discharge is not covered by a valid individual permit</li> <li>- the discharge used to test pipelines or tanks that have been most recently used to hold domestic sewage are discharged to a POTW</li> <li>- the maximum solid and liquid substances are removed</li> <li>- no chemicals are added after it enters the site, to any water used for hydrostatic pressure testing or to the tanks or pipelines being tested.</li> </ul> <p>Verify that the terms and conditions of the general permit are met.</p> <p>(NOTE: Installations with discharges from hydrostatic pressure testing of natural gas pipelines must submit a notice of intent to be covered by this general permit. All other hydrostatic pressure testing wastewater discharges may be covered by a general permit by submitting a Notice of Coverage.)</p> <p>(NOTE: This general permit expires on 11 June 1997 for discharges of hydrostatic pressure testing wastewaters to surface waters, and on 11 June 2002, for discharges of hydrostatic pressure testing wastewaters to a POTW.)</p>
<b>2-37.</b> Installations with discharges of hydrostatic pressure testing wastewaters to surface waters and covered by a general permit must meet treatment standards (GPDHPTW, Part VI(A) and Part VII).	<p>Verify that all hydrostatic pressure testing wastewater discharged directly to a surface water body has controls to prevent erosion and discoloration of the receiving water body and to dissipate energy prior to discharge.</p> <p>Verify that, for flowing surface waters, the maximum instantaneous flow does not exceed 10 percent of the surface water's ambient flow rate and for all other surface waters, the total volume of discharge of wastewaters to surface waters does not exceed 1 percent of the total volume of the receiving water body.</p> <p>Verify that the discharge does not cause a visible discoloration or foaming in the receiving waters.</p> <p>Verify that the discharge does not contain visible oil sheen or floating solids.</p> <p>Verify that, when surface waters are used for test water, the intake point of the pipe used to draw the test water is not located at a depth greater than one-half the total depth of the water column.</p>

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<p><b>2-37. (continued)</b></p>	<p>Verify that the pollutants discharged do not exceed the following maximum concentrations levels or, if discharges are from the same water body source as the test waters, pollutants discharged are not increased by more than the following levels:</p> <ul style="list-style-type: none"> <li>- total residual chlorine, 0.05 mg/L</li> <li>- total oil and grease, 10 mg/L</li> <li>- total suspended solids, 45 mg/L.</li> </ul> <p>Verify that the pH of discharges is not more than 0.5 units greater or less than the source body water for the following situation:</p> <ul style="list-style-type: none"> <li>- the same water body is used for the source of test waters and for the discharge of the hydrostatic pressure testing wastewaters</li> <li>- the pH of the source water is less than 6.0 or greater than 9.0.</li> </ul> <p>Verify that the pH of all other hydrostatic pressure testing wastewater discharges is not less than 6.0 or greater than 9.0.</p>
<p><b>2-38. Installations with discharges of hydrostatic pressure testing wastewaters to a POTW and covered by a general permit must meet treatment standards (GPDHPTW, Part VI(B) and Part VII).</b></p>	<p>Verify that all discharges of hydrostatic pressure testing wastewater to a POTW comply with the flow rate limitation and hours of discharge established by the receiving POTW.</p> <p>Verify that the discharge does not exceed 1 percent of the design flow of the POTW.</p> <p>Verify that the pollutants discharged do not exceed the following maximum concentrations levels or, if discharges are from the same water body source as the test waters, pollutants discharged are not increased by more than the following levels:</p> <ul style="list-style-type: none"> <li>- total residual chlorine, no limit</li> <li>- total oil and grease, 50 mg/L</li> <li>- total suspended solids, 100 mg/L.</li> </ul> <p>Verify that the pH of discharges are not more than 0.5 units greater or less than the source body water for the following situation:</p> <ul style="list-style-type: none"> <li>- the same water body is used for the source of test waters and for the discharge of the hydrostatic pressure testing wastewaters</li> <li>- the pH of the source water is less than 6.0 or greater than 9.0.</li> </ul> <p>Verify that the pH of all other hydrostatic pressure testing discharges wastewaters are not less than 6.0 or greater than 9.0.</p>

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<p><b>2-39.</b> Installations with discharges of hydrostatic pressure testing wastewaters to a POTW and covered by a general permit must meet monitoring and recordkeeping standards (GPDHPTW, Part VIII).</p>	<p>Verify that the wastewaters are analyzed for the following:</p> <ul style="list-style-type: none"> <li>- COD</li> <li>- total daily flow</li> <li>- maximum instantaneous flow</li> <li>- total iron</li> <li>- total chlorine residual</li> <li>- total oil and grease</li> <li>- total suspended solids</li> <li>- pH.</li> </ul> <p>Verify that the discharges of hydrostatic pressure testing wastewaters from pipelines and tanks which have been used to transport or hold natural gas are analyzed for polynuclear aromatic hydrocarbons.</p> <p>Verify that all wastewater samples are comprised only of hydrostatic pressure testing wastewater and taken prior to combination with other wastewaters.</p> <p>Verify that all samples are representative of the discharge during standard operating conditions.</p> <p>Verify that, each time wastewaters are discharged, the following monitoring frequency is met:</p> <ul style="list-style-type: none"> <li>- at least two grab samples are taken</li> <li>- one grab sample is taken during the first 10 percent of the time the discharge is expected to continue</li> <li>- one grab sample is taken during the last 10 percent of the time the discharge is expected to continue</li> <li>- a grab sample is taken to monitor pH when the discharge commences and every 4 h thereafter until the discharge ends.</li> </ul> <p>Verify that all analytical results are retained at the facility.</p>
<p><b>2-40.</b> Installations with discharges of hydrostatic pressure testing wastewaters to a POTW and covered by a general permit must meet recordkeeping standards for violations of the permit (GPDHPTW, Part IX(A)).</p>	<p>Verify that the installation records the following information in a log within 24 h of receiving analytical results, monitoring data, or any other information indicating a violation of the general permit:</p> <ul style="list-style-type: none"> <li>- the condition(s) or effluent limitation(s) violated</li> <li>- the analytical results and information demonstrating the violation(s)</li> <li>- the cause of the violation(s)</li> <li>- the period of noncompliance</li> <li>- the anticipated length of time the noncompliance is expected to continue and, upon correction, the date and time of correction</li> <li>- steps taken and planned to reduce, eliminate, and prevent a recurrence of the noncompliance, and the dates such steps are executed</li> <li>- the name and title of the person recording the information</li> <li>- the date and time the information is recorded.</li> </ul>

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<p><b>2-41.</b> Installations with discharges of hydrostatic pressure testing wastewaters to a POTW and covered by a general permit must meet reporting standards for violations of the permit (GPDHPTW, Part IX(B)).</p>	<p>Verify that installations submit a report to the Commissioner within 20 days of any of the following occurrences:</p> <ul style="list-style-type: none"> <li>- three simultaneous or consecutive violations of the same or different conditions of the general permit</li> <li>- four violations of the same or different conditions of the general permit in any consecutive 12-mo period</li> <li>- the exceedance of any effluent limitation, other than that for pH, by more than 200 percent and for pH by more than one standard unit.</li> </ul> <p>Verify that installations discharging to a POTW submit a copy of the report to the POTW receiving the discharge.</p> <p>Verify that, within 60 days after the deadline for submitting the report, the installation submits a certification signed by an independent professional engineer.</p> <p>Verify that the report and the certification is prepared by an independent professional engineer not in the regular employ of the permittee.</p>
<p><b>PUBLICLY OWNED TREATMENT WORKS (POTW)</b></p> <p><b>2-42.</b> Installations with publicly owned treatment works (POTW) must meet general operating standards (WDPR, Section 22a-430-3(l)).</p>	<p>Determine if the installation has a POTW.</p> <p>Verify that the POTW does not accept a new discharge of any process wastewaters or any cooling waters without verification from the Commissioner that a permit has been issued.</p> <p>Verify that the POTW notifies the Director of the following:</p> <ul style="list-style-type: none"> <li>- any known discharge of pollutants in excess of the quantities or concentrations permitted by the Commissioner</li> <li>- any known discharge of wastes in excess of the quantities or concentrations existing prior to the issuance of the POTW's permit</li> <li>- any known new discharges that are not permitted.</li> </ul> <p>Verify that the notification includes information on the quality and quantity of effluent entering the POTW and any anticipated impact of the discharge on the quantity or quality of effluent to be discharged from the POTW.</p>
<p><b>2-43.</b> Installations with POTW must meet monitoring standards (WDPR, Section 22a-430-3(j)(10)(D)).</p>	<p>Verify that the POTW submits on a quarterly basis to the Commissioner:</p> <ul style="list-style-type: none"> <li>- the results of two acute toxicity tests performed on an undiluted daily composite sample of the discharge</li> <li>- the results of daily composite samples for the substances listed in Appendix 2-2</li> </ul>

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<p><b>2-43. (continued)</b></p>	<p>Verify that a POTW with a toxicity test showing toxic impact conducts a second toxicity test and submits the results to the Commissioner within 30 days.</p> <p>Verify that the POTW submit a discharge toxicity evaluation within 60 days of the second of any two consecutive tests showing a toxic impact, or within 60 days of the third test within any 1 yr period with a toxic impact.</p>
<p><b>2-44.</b> Installations with POTW or facilities that discharge only domestic sewage to surface waters must meet secondary treatment requirements (WDP, Section 22a-430-4(r)).</p>	<p>Determine if the installation discharges only domestic sewage to surface waters.</p> <p>Verify that the installation meets the following biochemical oxygen demand effluent limitations:</p> <ul style="list-style-type: none"> <li>- the average concentration for all daily composite samples taken over any 30 consecutive day period does not exceed 30 mg/L</li> <li>- the average concentration for all daily composite samples taken over any 7 consecutive day period does not exceed 45 mg/L</li> <li>- the maximum daily concentration must not exceed 50 mg/L</li> <li>- the average effluent concentration must not exceed 15 percent of the average influent concentration for all daily composite samples taken in any 30 consecutive day period.</li> </ul> <p>Verify that the effluent does not exceed the pH range of 6.0 to 9.0 unless otherwise approved in the permit application.</p> <p>Verify that the installations meets the following suspended solids effluent limitations:</p> <ul style="list-style-type: none"> <li>- the average concentration for all daily composite samples taken over any 30 consecutive day period does not exceed 30 mg/L</li> <li>- the average concentration for all daily composite samples taken over any seven consecutive day period does not exceed 45 mg/L</li> <li>- the maximum daily concentration does not exceed 50 mg/L</li> <li>- the average effluent concentration does not exceed 15 percent of the average influent concentration for all daily composite samples taken in any 30 consecutive day period.</li> </ul>



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<p><b>SURFACE WATER QUALITY STANDARDS</b></p> <p><b>2-45.</b> Installations with surface waters must meet general surface water quality standards (Connecticut Water Quality Standards (WQS), II(2), (3), (5), (8), (13), and (15)).</p> <p><b>2-46.</b> Installations with classified surface waters must meet specific water quality standards (WQS II(9), (10), (29), and (30)).</p>	<p>Determine if the installation has surface waters.</p> <p>Verify that the installation protects and maintains existing water quality and designated uses.</p> <p>Verify that installations with surface waters with existing quality better than established standards for that class maintain the higher water quality standards.</p> <p>Verify that the installation makes no changes to the waters of the state that constitute an outstanding national or state resource or in waters that may affect these outstanding resource waters.</p> <p>Verify that the installation does not introduce contaminants into the waters of the state that could be expected to result in acute or chronic toxicity in aquatic or marine ecosystems outside a zone of influence.</p> <p>Verify that the installation does not discharge radioactive materials in concentrations which would be harmful to humans, animal, or aquatic life.</p> <p>(NOTE: The water quality criteria does not apply to conditions brought about by natural conditions. Natural hydrological and geological conditions may cause excursions from established criteria.)</p> <p>(NOTE: Surface water classes are designated by the Commissioner. Surface waters, including wetlands, that are not otherwise designated are considered Class A or Class SA. Watercourses which are fully enclosed in drainage conduits or pipes and not assigned a specific class may be considered to be the class of stream segment into which they discharge.)</p> <p>Determine the surface water class of any surface water on the installation.</p> <p>Verify that discharges to the surface water are authorized by the Commissioner.</p> <p>Verify that installations with Class AA, Class A, and Class B inland surface waters do not exceed the water quality standards listed in Appendix 2-3, Appendix 2-4, and Appendix 2-5, respectively.</p> <p>Verify that installations with Class SA or Class SB coastal or marine waters do not exceed the water quality standards listed in Appendix 2-6 and Appendix 2-7.</p> <p>(NOTE: Zones of influence may be established where a discharge is mixed with natural water. The standards for the zones of influence are established by the Commissioner and will be specified in the individual permits.)</p>

<b>COMPLIANCE CATEGORY:</b> <b>CLEAN WATER ACT (CWA)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>2-47.</b> Installations must meet standards for the discharge of sewage and waste (WQS, II(21) and (22)).</p> <p><b>GROUNDWATER QUALITY STANDARDS</b></p> <p><b>2-48.</b> Installations with classified groundwaters must meet specific water quality standards (WQS IV(34), (36), (37), (39), (40), and V).</p>	<p>Verify that installations continuously disinfect the effluent from domestic sewage plants located south of Interstate Highway 95 to protect the sanitary quality of shellfish resources.</p> <p>Verify that installations disinfect the effluent from domestic sewage plants located north of Interstate Highway 95 during the period from 1 May to 1 October.</p> <p>Verify that installations do not discharge sewage, sink, and galley wastes from boats.</p> <p>Determine the class of groundwater on the installation.</p> <p>(NOTE: Ground water not otherwise designated by the Commissioner will be classified as Class GA.)</p> <p>Verify that installations with existing groundwater quality better than established standards for that class maintain the higher water quality standards.</p> <p>Verify that the installation has a permit for discharges into Class GAA, GA, GB, and GC groundwaters.</p> <p>Verify that the groundwater is free from chemical constituents in concentrations that would be harmful to the assigned water class.</p> <p>Verify that the installation does not discharge radioactive materials in concentrations which would be harmful to humans, animal, or aquatic life.</p> <p>Verify that installations do not discharge alpha emitters in surface waters to which groundwaters flow that exceeds a concentration of 1,000 pCi/L.</p> <p>Verify that installations with Class GAA and Class GA groundwater do not exceed the water quality standards listed in Appendix 2-8 and Appendix 2-9.</p> <p>(NOTE: Zones of influence may be established where a discharge is mixed with natural water. The standards for the zones of influence are established by the Commissioner.)</p>

<b>COMPLIANCE CATEGORY:</b> <b>CLEAN WATER ACT (CWA)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>UNDERGROUND INJECTION</b></p> <p><b>2-49.</b> Installations must comply with standards for underground injection of hazardous waste (Hazardous Waste Management Regulations (HWMR) 22a-449(c)-105(f)).</p>	<p>Verify that the installation does not treat, store, or dispose of hazardous waste by underground injection.</p>
<p><b>HANDLING OF OIL</b></p> <p><b>2-50.</b> Installations that handle oil must meet permit standards (Connecticut General Statutes, Water Pollution Control, Chapter 466k, Section 22a-454).</p>	<p>Verify that persons acting as a contractor or engaged in the business of collecting, storing, or treating waste oil, petroleum, chemical liquids, or hazardous wastes has a permit from the Commissioner.</p> <p>Verify that installations disposing of waste oil, petroleum, chemical liquids, or hazardous waste has a permit from the Commissioner.</p>
<p><b>DISCHARGE OF SWIMMING POOL WASTEWATERS</b></p> <p><b>2-51.</b> Installations discharging swimming pool wastewaters must meet specific requirements (Guidelines for the Discharge of Swimming Pool Wastewaters (GDSPW), Figure 1, (B), (C), (F)(1), and (F)(2)).</p>	<p>Determine if the installation discharges swimming pool wastewaters.</p> <p>Verify that the installation discharges swimming pool wastewaters at locations allowed and under the conditions listed in Appendix 2-10 or by a licensed hauler to a wastewater treatment facility licensed for that purpose.</p> <p>Verify that swimming pool wastewater is not discharged to a wetlands, either directly or via a storm sewer.</p> <p>Verify that swimming pool cleaning and swimming pool backwash wastewaters are not discharged to any surface water body either directly or via a storm sewer.</p> <p>(NOTE: Local approval may be required for the discharge of swimming pool wastewater.)</p>

<b>COMPLIANCE CATEGORY:</b> <b>CLEAN WATER ACT (CWA)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>2-52.</b> Installations discharging swimming pool wastewaters to a sanitary sewer must meet specific requirements (GDSPW, Section (A)).</p>	<p>Verify that the discharge of swimming pool wastewaters to sanitary sewers meet the following requirements:</p> <ul style="list-style-type: none"> <li>- the pH of the discharge is between 5.5 and 10</li> <li>- the total residual chlorine is nondetectable by a water test kit (less than 0.1 mg/L)</li> <li>- prior to the discharge of wastewater to a sanitary sewer, approval from the municipality has been obtained</li> <li>- no water treatment chemicals are added to the pool for at least 1 week prior to draining.</li> </ul>
<p><b>2-53.</b> Installations discharging swimming pool wastewaters to surface waters must meet specific requirements (GDSPW, Section (B)).</p>	<p>Verify that installations discharging swimming pool draining wastewaters to a surface water body such as a stream, river, lake, or pond meet the following conditions:</p> <ul style="list-style-type: none"> <li>- the pH of the discharge is between 6.5 and 8.0</li> <li>- the total residual chlorine is nondetectable by a water test kit (less than 0.1 mg/L)</li> <li>- the discharge does not cause foaming or discoloration in the receiving water</li> <li>- no water treatment chemicals are added to the pool for at least 1 week prior to draining.</li> </ul> <p>Verify that swimming pool draining or backwash wastewater discharged to the ground are discharged at least 50 ft away from a wetland and is acceptable to the state and the local wetlands agency.</p> <p>(NOTE: Some local wetland agencies require a buffer zone greater than 50 ft for discharges to the ground.)</p>
<p><b>2-54.</b> Installations discharging swimming pool wastewaters to the ground must meet specific requirements (GDSPW, Section (D)).</p>	<p>Verify that swimming pool cleaning wastewaters are not discharged to the ground surface.</p> <p>Verify that swimming pool backwash wastewaters from public pools and pools that serve more than one household do not discharge to the ground surface.</p> <p>(NOTE: Swimming pools used by only one household or family may discharge to the ground surface if the discharge point is at least 50 ft away from any surface water body, watercourse, or wetlands.)</p> <p>Verify that swimming pool draining wastewaters discharged to the ground surface meet the following standards:</p> <ul style="list-style-type: none"> <li>- the pH of the discharge is between 6.5 and 8.0</li> <li>- the total residual chlorine is nondetectable by a water test kit (less than 0.1 mg/L)</li> <li>- no water treatment chemicals are added to the pool for at least 1 week prior to draining.</li> </ul>

<b>COMPLIANCE CATEGORY:</b> <b>CLEAN WATER ACT (CWA)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>2-55.</b> Installations with swimming pool wastewaters discharging to a subsurface leaching system must meet specific discharge standards (GDSPW, Section (E)).</p>	<p>Verify that the subsurface leaching system for residential swimming pools are dedicated for this purpose only or the discharge does not over-tax or interfere with the performance of the system.</p> <p>Verify that the subsurface leaching system for nonresidential swimming pools is dedicated for this purpose only with no connections allowed into subsurface sewage disposal systems (septic systems) and associated leaching fields.</p> <p>Verify that swimming pool wastewater discharges to a subsurface leaching system meet the following conditions:</p> <ul style="list-style-type: none"> <li>- the pH of the discharge is between 6.5 and 8.0</li> <li>- the total residual chlorine is nondetectable by a water test kit (less than 0.1 mg/L)</li> <li>- no water treatment chemicals are added to the pool for at least 1 week prior to draining.</li> </ul>

## Appendix 2-1

### Effluent Limitations for Metal Finishing Discharges (WDPR 22a-430-4(s))

Parameter	Average Monthly (mg/L)	Maximum Daily (mg/L)	Maximum Instantaneous <sup>2</sup> (mg/L)
Aluminum <sup>4</sup>	2.0	4.0	6.0
Barium	2.0	4.0	6.0
Cadmium <sup>1</sup>	0.1 (0.07)	0.5 (0.110)	0.75
Chromium, hexavalent <sup>3</sup>	0.1	0.2	0.3
Chromium, total	1.0	2.0	3.0
Copper	1.0	2.0	3.0
Cyanide, amenable <sup>3</sup>	0.1	0.2	0.3
Cyanide, total	0.65	1.2	--
Fluoride	20.0	30.0	45.0
Gold	0.1	0.5	0.75
Iron <sup>4</sup>	3.0	5.0	7.5
Lead	0.1	0.5	0.75
Nickel	1.0	2.0	3.0
Silver	0.1	0.5	0.75
Tin	2.0	4.0	6.0
Zinc	1.0	2.0	3.0
Total suspended solids <sup>4</sup>	20.0	30.0	45.0
Oil and grease <sup>4</sup>	10.0	--	20.0

<sup>1</sup> All values are from new and existing discharges except for cadmium, in which case the numbers in the parentheses are for new discharges only.

<sup>2</sup> As determined by a grab sample.

<sup>3</sup> All values are for the effluent from the treatment system prior to mixing with any other wastewaters or discharges.

<sup>4</sup> These limitations are for NPDES permits only.



## Appendix 2-2

### Toxic Substances

(WDPR, Appendix B Table III)

Antimony,	total
Arsenic,	total
Beryllium,	total
Cadmium,	total
Chromium,	total
Copper,	total
Lead,	total
Mercury,	total
Nickel,	total
Selenium,	total
Silver,	total
Zinc,	total
Cyanide,	total
Cyanide,	amenable
Phenols,	total





## Appendix 2-3

### Inland Surface Water Quality Criteria - Class AA (Water Quality Standards, Section III, Table 1)

Parameter	Standard
Aesthetics	Uniformly excellent.
Dissolved oxygen	Not less than 5 mg/L at any time.
Sludge deposits-solid refuse	None other than of natural origin. floating solids-oils-grease scum
Color	None other than of natural origin.
Suspended and settleable solids	None in concentrations or combinations that would impair the most sensitive designated use; none aesthetically objectionable; none that would significantly alter the physical or chemical composition of the bottom; or none that would adversely impact aquatic organisms living in or on the bottom substrate.
Silt or sand deposits	None other than of natural origin, except as may result from normal agricultural, road maintenance, construction activity, or dredging if reasonable controls or best management practices are used.
Turbidity	Must not exceed 5 NTU over ambient conditions. All reasonable controls or best management practices are to be used.
Indicator bacteria	Total coliform organisms (MF) must not exceed a monthly arithmetic mean of 100 per 100 mL for the most recent 12 mo. No individual sample can exceed 500 per 100 mL.
Taste and odor	None other than of natural origin.
pH	As naturally occurs.
Allowable temperature increase	None other than of natural origin, except when it can be demonstrated that fish spawning and growth will not be impaired, in which case Class B standards and criteria will apply.
Chemical constituents	None in concentrations or combinations that would be harmful to the most sensitive designated water use.
Phosphorus	None other than of natural origin.
Sodium	Not to exceed 20 mg/L.

Appendix 2-3 (continued)

Parameter	Standard
<p>Benthic invertebrates A wide variety of macroinvertebrate that inhabit lotic waters</p>	<p>taxa should normally be present, and all functional feeding groups should normally be well represented. Presence and productivity of aquatic species is not limited, except by natural conditions, permitted flow regulations, or irreversible cultural impacts. Taxa within the order Plecoptera (stoneflies), Coleoptera (beetles), and Trichoptera (caddisflies) should be well represented.</p>
<b>CLASSIFICATIONS</b>	
- AA	Known or presumed to meet water quality criteria that support the designated uses.
- B/AA or C/AA	May not meet Class AA water quality criteria or designated uses. The water quality goal is achievement of Class AA criteria and attainment of Class AA designated uses.

## Appendix 2-4

### Inland Surface Water Quality Criteria - Class A (Water Quality Standards, Section III, Table 2)

Parameter	Standard
Aesthetics	Uniformly excellent.
Dissolved oxygen	Not less than 5 mg/L at any time.
Sludge deposits-solid refuse floating solids-oils-grease scum	None other than of natural origin.
Color	None other than of natural origin.
Suspended and settleable solids	None in concentrations or combinations that would impair the most sensitive designated use, none aesthetically objectionable, none that would significantly alter the physical or chemical composition of the bottom, or none that would adversely impact aquatic organisms living in or on the bottom substrate.
Silt or sand deposits	None other than of natural origin, except as may result from normal agricultural, road maintenance, construction activity, or dredging if reasonable controls or best management practices are used.
Turbidity	Must not exceed 5 NTU over ambient conditions. All reasonable controls or best management practices are to be used.
Indicator bacteria	Total coliform organisms (MF) must not exceed a monthly arithmetic mean of 100 per 100 mL for the most recent 12 mo. No individual sample can exceed 500 per 100 mL. For established bathing waters, enterococcal organisms must not exceed a geometric mean of 33 per 100 mL and no sample can exceed 61 per 100 mL.
Taste and odor	None other than of natural origin.
pH	As naturally occurs.
Allowable temperature increase	None other than of natural origin, except when it can be demonstrated that fish spawning and growth will not be impaired, in which case Class B standards and criteria will apply.
Chemical constituents	None in concentrations or combinations that would be harmful to the most sensitive designated water use.

**Appendix 2-4 (continued)**

<b>Parameter</b>	<b>Standard</b>
<b>Phosphorus</b>	None other than of natural origin.
<b>Benthic invertebrates that inhabit lotic waters</b>	<p>A wide variety of macroinvertebrate taxa should normally be present, and all functional feeding groups should normally be well represented.</p> <p>Presence and productivity of aquatic species is not limited, except by natural conditions, permitted flow regulations, or irreversible cultural impacts. Water quality standards must be sufficient to sustain a diverse macroinvertebrate community of indigenous species.</p> <p>Taxa within the order Plecoptera (stoneflies), Coleoptera (beetles), and Tricoptera (caddisflies) should be well represented.</p>
<b>CLASSIFICATIONS</b>	
- A	Known or presumed to meet water quality criteria that support the designated uses.
- B/A or C/A	May not meet Class A water quality criteria or designated uses. The water quality goal is achievement of Class A criteria and attainment of Class A designated uses.

## Appendix 2-5

### Inland Surface Water Quality Criteria - Class B (Water Quality Standards, Section III, Table 3)

Parameter	Standard
Aesthetics	Uniformly excellent.
Dissolved oxygen	Not less than 5 mg/L at any time.
Sludge deposits-solid refuse floating solids-oils-grease scum	None except for small amounts that may result from the discharge from a wastewater treatment facility providing appropriate treatment.
Color	None that causes visible discoloration of the receiving stream outside the designated zone of influence.
Suspended and settleable solids	None in concentrations or combinations that would impair the most sensitive designated use, none aesthetically objectionable, none that would significantly alter the physical or chemical composition of the bottom, or none that would adversely impact aquatic organisms living in or on the bottom substrate. Must not exceed 10 mg/L over ambient conditions.
Silt or sand deposits	None other than of natural origin, except as may result from normal agricultural, road maintenance, construction activity, or dredging if reasonable controls or best management practices are used.
Turbidity	Must not exceed 5 NTU over ambient conditions. All reasonable controls or best management practices are to be used.
Indicator bacteria	Total coliform organisms (MF) must not exceed a monthly geometric mean of 200 organisms per 100 mL in any group of samples nor can 10 percent of the sample exceed 400 organisms per 100 mL.  For established bathing waters, enterococcal organisms must not exceed a geometric mean of 33 organisms per 100 mL and no sample can exceed 61 per 100 mL.
Taste and odor	None that would impair any usages assigned to this class.
pH	6.5 to 8.0
Allowable temperature increase	None except when the increase will not exceed the recommended limit on the most sensitive receiving water used and in no case to exceed 85 °F or in any case to raise the normal temperature of the receiving water 4 °F.

**Appendix 2-5 (continued)**

<b>Parameter</b>	<b>Standard</b>
Chemical constituents	None in concentrations or combinations that would be harmful to the most sensitive designated water use.
Phosphorus	None other than of natural origin.
Benthic invertebrates which inhabit lotic waters	A wide variety of macroinvertebrate taxa should normally be present, and all functional feeding groups should normally be well represented. Presence and productivity of aquatic species is not limited, except by natural conditions, permitted flow regulations. Taxa within the order Plecoptera (stoneflies), Coleoptera (beetles), and Tricoptera (caddisflies) should be well represented.
<b>CLASSIFICATIONS</b>	
- B	Known or presumed to meet water quality criteria that support the designated uses.
- C/B or D/B	May not meet Class B water quality criteria or designated uses. The water quality goal is achievement of Class B criteria and attainment of Class B designated uses.

## Appendix 2-6

### Coastal and Marine Surface Water Quality Criteria - Class SA (Water Quality Standards, Section III, Table 7)

Parameter	Standard
Aesthetics	Uniformly excellent.
Dissolved oxygen	Not less than 6 mg/L at any time.
Sludge Deposits-solid refuse floating solids-oils-grease scum	None other than of natural origin.
Color	None other than of natural origin.
Suspended and settleable solids	None other than of natural origin.
Silt or sand deposits	None other than of natural origin, except as may result from normal agricultural, road maintenance, construction activity, or dredging if reasonable controls or best management practices are used.
Turbidity	None other than of natural origin, except as may result from normal agricultural, road maintenance, construction activity, or dredging providing reasonable controls or best management practices are used.
Indicator bacteria	<p>Fecal coliform organisms must not exceed a monthly geometric mean of 14 most probable number (MPN) per 100 mL for the most recent 12 mo nor can 10 percent of the sample exceed 43 MPN per 100 mL.</p> <p>For established bathing waters, enterococcal organisms must not exceed a geometric mean of 33/100 mL and no sample can exceed 61/100 mL.</p>
Taste and odor	None that would impair any usages assigned to this class.
pH	6.5 to 8.0
Allowable temperature increase	None except when the increase will not exceed the recommended limit on the most sensitive receiving water used and in no case to exceed 85 °F or in any case raise the normal temperature of the receiving water 4 °F.
Chemical constituents	None in concentrations or combinations that would be harmful to the most sensitive designated water use.



Appendix 2-6 (continued)

Parameter	Standard
<b>CLASSIFICATIONS</b>	
- SA	Known or presumed to meet water quality criteria that support the designated uses.
- SB/SA or SC/SA	May not meet Class SA water quality criteria or designated uses. The water quality goal is achievement of Class SA criteria and attainment of Class SA designated uses.

## Appendix 2-7

### Coastal and Marine Surface Water Quality Criteria - Class SB (Water Quality Standards, Section III, Table 8)

Parameter	Standard
Aesthetics	Good to excellent.
Dissolved oxygen	Not less than 5 mg/L at any time.
Sludge deposits-solid refuse floating solids-oils-grease scum	None except for small amounts that may result from the discharge from a wastewater treatment facility providing appropriate treatment.
Color	None that causes visible discoloration of the receiving water outside of the designated zone of influence.
Suspended and settleable solids	None in concentrations or combinations that would impair the most sensitive designated use, none aesthetically objectionable, none that would significantly alter the physical or chemical composition of the bottom, or none that would adversely impact aquatic organisms living in or on the bottom substrate. Must not exceed 10 mg/L over ambient conditions.
Silt or sand deposits	None other than of natural origin, except as may result from normal agricultural, road maintenance, construction activity, or dredging if reasonable controls or best management practices are used.
Turbidity	None other than of natural origin, except for small amounts that may result from the discharge from a waste treatment facility providing appropriate treatment. All reasonable controls and best management practices are to be used.
Indicator bacteria	<p>Fecal coliform organisms must not exceed a monthly geometric mean of 200 organisms per 100 mL. Nor can 10 percent of the samples exceed 400 organisms per 100 mL.</p> <p>Fecal coliform organisms must not exceed a monthly arithmetic mean of 88 MPN/100 mL for the most recent 12 mo nor can 10 percent of the sample exceed 260 MPN/100 mL.</p> <p>For established bathing waters, enterococcal organisms must not exceed a geometric mean of 33/100 mL and no sample can exceed 61/100 mL.</p>

**Appendix 2-7 (continued)**

<b>Parameter</b>	<b>Standard</b>
Taste and odor	As naturally occurs. None that would impair any usages assigned to this class.
pH	6.5 to 8.0
Allowable temperature increase	None except when the increase will not exceed the recommended limit on the most sensitive receiving water used and in no case to exceed 85 °F or in any case raise the normal temperature of the receiving water 4 °F.
Chemical constituents	None in concentrations or combinations that would be harmful to the most sensitive designated water use.
<b>CLASSIFICATIONS</b>	
- SB	Known or presumed to meet water quality criteria that support the designated uses.
- SC/SB or SD/SB	May not meet Class SB water quality criteria or designated uses. The water quality goal is achievement of Class SB criteria and attainment of Class SB designated uses.

## Appendix 2-8

### Groundwater Quality Standards - Class GAA

(Water Quality Standards, Section V, Table 1)

Parameter	Standard
Dissolved oxygen	As naturally occurs.
Oils and grease	None other than of natural origin.
Color and turbidity	None other than of natural origin.
Coliform bacteria	Not to exceed a monthly arithmetic mean of 1, or more than 4 in any individual sample.
pH	As naturally occurs or as a result from normal agricultural, lawn maintenance, or construction activity if all reasonable controls are used.
Chemical constituents	Subject to the standards of Section 19-13-B102 of the Connecticut Public Health Code, Advisories of the Department of Public Health, and the primary and secondary standards of the Federal <i>Safe Drinking Water Act</i> (SDWA).
<b>CLASSIFICATIONS</b>	
- GAA	Groundwaters tributary to public water supply watersheds or within the area of influence of community and noncommunity water supply wells. Presumed suitable for direct human consumption without the need for treatment. The state's goal is to maintain drinking water quality.
- GB/GAA	Groundwaters tributary to public water supply watersheds or within the area of influence of community and noncommunity water supply wells. May not be suitable for direct human consumption without treatment due to contamination from waste discharges, spills or leaks of chemical contamination, or land use impacts. The state's goal is to maintain drinking water quality.



## Appendix 2-9

### Groundwater Quality Standards - Class GA

(Water Quality Standards, Section V, Table 2)

Parameter	Standard
Dissolved oxygen	As naturally occurs.
Oils and grease	None other than of natural origin.
Color and turbidity	None other than of natural origin.
Coliform bacteria	Not to exceed a monthly arithmetic mean of 1, or more than 4 in any individual sample.
pH	As naturally occurs or as a result from normal agricultural, lawn maintenance, or construction activity if all reasonable controls are used.
Chemical constituents	Subject to the standards of Section 19-13-B102 of the Connecticut Public Health Code, Advisories of the Department of Public Health, and the primary and secondary standards of the Federal <i>Safe Drinking Water Act</i> (SDWA).
<b>CLASSIFICATIONS</b>	
- GA	Groundwaters within the area of influence of private and potential public wells. Presumed suitable for direct human consumption without the need for treatment. The state's goal is to maintain drinking water quality.
- GB/GA	May not be suitable for direct human consumption without treatment due to contamination from waste discharges, spills or leaks of chemical contamination, or land use impacts. The state's goal is to maintain drinking water quality.



## Appendix 2-10

### Allowable Discharges and Conditions for Swimming Pool Wastewaters (Guidelines for the Discharge of Swimming Pool Wastewater)

Discharge Location	Discharge Allowed			pH range	Requirements
	Draining	Cleaning	Backwash		
Sanitary sewer	Yes	Yes	Yes	5.5-10	Town approval prior to connecting to sanitary system.
Surface water body	Yes	No	No	6.5-8	Discharge may not cause discoloration or foaming in receiving water body.
Ground surface	Yes	No	1.No 2.Yes	6.5-8	1. Public pools and pools that serve more than one household.  2. One family residential pools if discharge is at least 50 ft from surface water, watercourse, or wetland boundry.
Subsurface	Yes	Yes	Yes	6.5-8	Dedicated leaching systems or nondedicated leaching systems with sufficient capacity.





<b>INSTALLATION:</b>	<b>COMPLIANCE CATEGORY:</b> <b>CLEAN WATER ACT (CWA)</b> <b>Connecticut Supplement</b>	<b>DATE:</b>	<b>REVIEWER(S):</b>
<b>STATUS</b> <b>NA   C   RMA</b>	<b>REVIEWER COMMENTS:</b>		

## **SECTION 3**

**SAFE DRINKING WATER ACT (SDWA)**

**Connecticut Supplement**

# SECTION 3

## SAFE DRINKING WATER ACT (SDWA)

### Connecticut Supplement

#### Definitions

These definitions were taken from the Regulations of Connecticut State Agencies, Connecticut Department of Public Health, Standards for Quality of Public Drinking Water, Section 19-13-B102(a).

- *Active Source of Supply* - all springs, streams, watercourses, brooks, rivers, lakes, ponds, wells, or underground waters from which water is taken on a regular basis for water supply purposes. A number of wells drawing from a single aquifer or more than one surface water body or combination of surface water and groundwater sources connected to a common distribution system may, at the discretion of the Department, be considered a single source.
- *Certified Distribution System Operator* - an operator who has met the education, experience and examination requirements of the state of Connecticut.
- *Certified Treatment Plant Operator* - an operator who has met the education, experience and examination requirements of the State of Connecticut.
- *Community Water System* - a public water system that regularly serves at least 25 yr-round residents.
- *Contaminant* - any physical, chemical, biological, or radiological substance or matter in water.
- *CT* - the product of the residual disinfectant concentration "C" (measured in mg/L) determined before or at the first customer, and the corresponding disinfectant contact time, "T" (measured in min). If a public water System applies disinfectants at more than one point prior to the first customer, CT must be determined for each disinfectant sequence before or at the first customer to determine the total percent inactivation.
- *Department* - the Connecticut Department of Health Services.
- *Diatomaceous Earth Filtration* - a process resulting in substantial particulate removal in which a pre-coat cake of diatomaceous earth filter media is deposited on a support membrane, and while the water is passing through the cake on the septum, additional filter media known as body feed is continuously added to the feed water to maintain the permeability of the filter cake.
- *Direct Filtration* - a series of processes, including coagulation and filtration but excluding sedimentation, resulting in substantial particulate removal.
- *Disinfectant Contact Time* - the time in minutes it takes for water to move from the point of disinfectant application or the previous point of disinfection residual measurement to a point before or at the point where residual disinfectant concentration "C" is measured.
- *Disinfection* - a process that inactivates pathogenic organisms in water by chemical oxidants or other equivalent agents.
- *End of Distribution System* - the last service connection at the end of a dead-end water main.

- *Filtration* - a process for removing particulate matter from water through porous media.
- *Gross Alpha Particle Activity* - the total radioactivity due to alpha particle emission as inferred from measurement on a dry sample.
- *Gross Beta Particle Activity* - the total radioactivity due to a beta particle emission as inferred from measurement on a dry sample.
- *Groundwater Under the Direct Influence of Surface Water* - any water beneath the surface of the ground with significant occurrences of insects or other macroorganisms, algae, or large-diameter pathogens such as *Giardia lamblia*, or significant and relatively rapid shifts in water characteristics such as turbidity, temperature, conductivity, or pH, which closely correlates to surface water conditions.
- *Maximum Contamination Level (MCL)* - the maximum permissible level of a contaminant in water which is delivered to any consumer of a public water system.
- *Method Detection Limit (MDL)* - the minimum concentration of a substance that can be measured and reported with a 99 percent confidence level that the true value is greater than zero.
- *Near the First Service Connection* - at one of the 20 percent of service connections in the entire system that are nearest the water supply treatment system, as measured by the water transport time within the distribution system.
- *Noncommunity Water System* - a public water system that serves at least 25 nonresidents for at least 60 days out of the year and is not a community water system.
- *Nontransient Noncommunity Water System* - a public water system that is not a community water system and that regularly serves at least 25 of the same persons over 6 mo of the year.
- *Notification Level* - the level of a contaminant that, if exceeded, will require public notification by a public water system to its consumers.
- *Other Unregulated Contaminants* - contaminants that meet or exceed the Department's action level or contaminant level for which the maximum contaminant level goal has been proposed by the U.S. Environmental Protection Agency (USEPA).
- *Physical Parameters* - color, turbidity, pH, and odor.
- *PicoCurie (pCi)* - the quantity of radioactive material producing 2.22 nuclear transformations per minute.
- *Point of Disinfectant Application* - the point where the disinfectant is applied and water downstream of that point is not subject to recontamination by surface water.
  - *Point of Entry* - a location on an active source of supply that is after any treatment and before entrance to the distribution system.
- *Point of Disinfection Application* - the point at which the disinfectant is applied and water downstream of that point is not subject to recontamination by surface water runoff.
- *Public Water System* - any water company that provides water to 15 or more consumers or 25 or more persons daily for at least 60 days of the year.

- *Repeat Sample* - a sample collected as the result of total coliform-positive routine sample.
- *Residual Disinfectant Concentration* - the concentration of disinfectant measured in milligrams per liter in a representative sample of water.
- *Routine Sample* - a sample collected at a location and frequency as specified in the approved sample siting plan.
- *Sanitarian* - a person trained in environmental health who is qualified to carry out educational and investigational duties in the fields of environmental health such as investigations of air, water, sewage, foodstuffs, housing, and refuse by observing, sampling, testing, and reporting and is certified by the Department.
- *Sanitary Survey* - an onsite inspection of the water source, facilities, equipment, operation, and maintenance of a public water system for the purpose of evaluating the adequacy of such source, facilities, equipment, operation, and maintenance for producing and distributing safe drinking water.
- *Slow Sand Filtration* - a treatment process involving passage of raw water through a bed of sand at low velocity (generally less than 0.16 gal/ft<sup>2</sup>/min) resulting in substantial particulate removal by physical and biological mechanisms.
- *Sourcewater* - raw water at the source of supply before any kind of treatment.
- *Surface Water* - all water open to the atmosphere and subject to surface water runoff.
- *Tier 1 Violation* - a public water system has failed to comply with requirement of any of the following:
  1. an applicable MCL or action level
  2. regulation regarding the quality or quantity of drinking water ready for consumption with the expectation of odor, color, pH, or sodium content
  3. applicable treatment techniques or schedules prescribed pursuant to a variance or exception.
- *Tier 2 Violation* - a public water system has failed to:
  1. perform monitoring requirements
  2. comply with testing procedures established by the USEPA, a variance, or exception.
- *Total Trihalomethanes (TTHMs)* - the arithmetic sum of the concentrations per liter of trihalomethane (THM) compounds (trichloromethane, dibromochloromethane, bromodichloromethane, and tribromomethane) rounded to two significant figures.
- *Trihalomethanes (THM)* - the family of organic halogen compounds resulting from the displacement of three of the four hydrogen atoms in methane with chlorine, bromide, or iodine atoms in the molecular structure.
- *Turbidity* - a measure of the cloudiness of water caused by suspended particles. The units of measure for turbidity are nephelometric turbidity units (NTU).
- *USEPA* - the U.S. Environmental Protection Agency.
- *Virus* - a virus of fecal origin that is infectious to humans by waterborne transmission.
- *Water Company* - one which meets the requirements of section 25-32a of the Connecticut General Statutes.

- *Waterborne Disease Outbreak* - the significant occurrence of acute infectious illness, epidemiologically associated with the ingestion of water from a public water system deficient in treatment, as determined by the Department.

**SAFE DRINKING WATER ACT (SDWA)**  
**GUIDANCE FOR CONNECTICUT CHECKLIST USERS**

<b>Applicability:</b>	<b>Refer to Checklist Items:</b>
Water Source Standards	3-1 and 3-2
Primary Drinking Water Standards	3-3 through 3-18
Monitoring for Specially Treated Water	3-19 through 3-21
Monitoring for Systems That Filter and Disinfect	3-22 through 3-27
Water System Survey	3-28
Water Distribution Systems	3-29
Laboratory and Operating Tests	3-30
Recordkeeping, Reporting, and Public Notification	3-31 through 3-33
Treatment Technique	3-17 through 3-19
Water Use Monitoring	3-34
Water System Design	3-35 and 3-36

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>SOURCEWATER STANDARDS</b></p> <p><b>3-1.</b> Water systems with an active surface water source supply must conduct a sanitary survey of the watershed (Regulations of Connecticut State Agencies, Section 19-13-B102(b)).</p> <p><b>3-2.</b> Water systems are required to meet standards for untreated water at the intake to the treatment plant (Regulations of Connecticut State Agencies, Section 19-13-B102(c)).</p>	<p>Verify that water systems with an active surface water source conduct a sanitary survey of the watershed to the intake at least annually.</p> <p>Verify that a report of the sanitary survey covering the previous calendar year is submitted to the State Health Department by 1 March of each year.</p> <p>Verify that at the intake to the treatment plant, water systems test for bacteriological, color, and turbidity parameters, quarterly; and all other parameters, annually.</p> <p>Verify that the untreated water does not exceed the following coliform levels:</p> <ul style="list-style-type: none"> <li>- for systems using disinfection and chemical treatment, coliform levels do not exceed: <ul style="list-style-type: none"> <li>- 100/100 mL monthly average based on a running arithmetic average for the most recent 12 mo period</li> <li>- 500/100 mL for any individual sample</li> </ul> </li> <li>- for systems using filtration, coliform levels do not exceed 20,000/100 mL based on a monthly geometric mean.</li> </ul> <p>Verify that the untreated water does not exceed the following parameters for color:</p> <ul style="list-style-type: none"> <li>- for systems using disinfection and chemical treatment, color does not exceed 20 standard units in more than 10 percent of the samples for the most recent 12 mo period</li> <li>- for systems using filtration, color does not exceed 250 standard units based on a monthly geometric mean.</li> </ul> <p>Verify that the untreated water does not exceed the following turbidity levels:</p> <ul style="list-style-type: none"> <li>- for systems that use disinfection and chemical treatment, turbidity levels in a representative sample of the source water immediately prior to the first or only point of disinfection application does not exceed 5 NTUs.</li> <li>- for systems using filtration, 250 standard units as measured by a monthly geometric mean.</li> </ul> <p>Verify that the untreated water does not exceed the inorganic chemical levels specified in Appendix 3-1.</p> <p>Verify that the untreated water does not exceed the pesticide levels specified in Appendix 3-2.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>PRIMARY DRINKING WATER STANDARDS</b></p> <p><b>3-3.</b> Water systems must meet specific physical standards for water ready for consumption (Regulations of Connecticut State Agencies, Section 19-13-B102 (e)(1)).</p> <p><b>3-4.</b> Water systems must meet specific monitoring standards for inorganic chemicals (Regulations of Connecticut State Agencies, Sections 19-13-B102(e)(2) and (e)(7)(O)).</p> <p><b>3-5.</b> Community and noncommunity water systems must meet specific monitoring standards for pesticides and herbicides (Regulations of Connecticut State Agencies, Section 19-13-B102(e)(3)).</p>	<p>(NOTE: When one water system supplies water to another system, tests for inorganic, organic, and radioactive substances need not be made by the second water system. Lead must be tested for by both systems. Bacteriological and physical tests must be conducted at required frequencies by both systems.)</p> <p>Verify that the color of the water leaving the treatment plant or at representative sampling points in the distribution system does not exceed 15 standard units.</p> <p>Verify that the odor of the water in the treatment plant effluent does not exceed a level of 2 based on the scale listed in Appendix 3-3.</p> <p>Verify that the pH level of water entering the distribution system is not less than 6.4 and does not exceed 8.5.</p> <p>Verify that the water system does not exceed the levels for inorganic chemicals listed in Appendix 3-4.</p> <p>Verify that a community water systems using groundwater test at least annually for nitrate nitrogen content.</p> <p>Verify that community and noncommunity water systems that use surface water sources monitor for pesticides and herbicides as follows:</p> <ul style="list-style-type: none"> <li>- sample from each source annually</li> <li>- samples collected between 1 May and 31 August</li> <li>- samples collected from the plant effluent prior to entry into the distribution system.</li> </ul> <p>(NOTE: The Department may require water systems that use groundwater as a sole source to monitor for pesticides and herbicides. The Department may accept testing of a blended source sample in lieu of testing of each individual source if multiple sources are blended prior to entry into the distribution system.)</p> <p>Verify that community and noncommunity water systems that monitor for pesticides and herbicides do not exceed the MCLs specified in Appendix 3-5.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>3-6.</b> Community and nontransient noncommunity water systems must meet specific monitoring standards for organic chemicals (Regulations of Connecticut State Agencies, Section 19-13-B102(e)(4)).</p>	<p>Verify that community and nontransient noncommunity water systems do not exceed the maximum contamination levels for organic chemicals listed in Appendix 3-6 at each source.</p> <p>Verify that organic chemical samples are analyzed by a Department approved laboratory.</p> <p>Verify that organic chemical samples are collected by personnel that meet any of the following criteria:</p> <ul style="list-style-type: none"> <li>- a technical person employed by a state-approved environmental laboratory</li> <li>- a certified distribution system operator or certified treatment plant operator</li> <li>- a sanitarian</li> <li>- an employee of the Department</li> <li>- a person under the direct supervision of either a certified distribution system operator or a certified treatment plant operator.</li> </ul> <p>Verify that community and nontransient noncommunity water systems monitor each source for organic chemicals quarterly for a minimum of one year and at the frequency specified in Appendix 3-7 thereafter.</p> <p>(NOTE: The Department may accept testing of a blended source sample in lieu of testing of each individual source if multiple sources are blended prior to entry into the distribution system.)</p> <p>Verify that community and nontransient noncommunity water systems sample for organic chemicals after treatment if any, and prior to entry to the distribution system.</p> <p>(NOTE: Surface water systems may sample for organic chemicals from the plant effluent prior to entry to the distribution system or in the distribution system itself as approved by the Department.)</p> <p>Verify that groundwater systems that detect one or more of the following compounds conduct quarterly analysis for vinyl chloride:</p> <ul style="list-style-type: none"> <li>- trichloroethylene</li> <li>- tetrachloroethylene</li> <li>- 1,2 dichloroethane</li> <li>- 1,1,1 trichloroethane</li> <li>- cis 1,2 dichloroethylene</li> <li>- trans 1,2 dichloroethylene</li> <li>- 1,1 dichloroethylene.</li> </ul> <p>(NOTE: Community water systems that serve a population of 10,000 or more must comply with Federal requirements for total trihalomethanes sampling, analyses, reporting, and notification. When trihalomethanes (THM) are detected in water entering the distribution system as a result of disinfection, the Department may exempt the water system from quarterly monitoring.)</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>3-7.</b> Community water systems must not exceed natural radioactivity MCLs (Regulations of Connecticut State Agencies, Section 19-13-B102(e)(5)).</p> <p><b>3-8.</b> Systems that utilize surface water and serve more than 100,000 persons must not exceed MCLs for manmade radioactivity (Regulations of Connecticut State Agencies, Section 19-13-B102(e)(5)).</p> <p><b>3-9.</b> Community water systems must meet specific monitoring standards for total coliforms (Regulations of Connecticut State Agencies, Section 19-13-B102(e)(7)(A)).</p>	<p>Verify that community water systems monitor for natural radioactivity every 4 yr.</p> <p>Verify that gross alpha levels are determined by testing a composite sample of four quarterly samples or averaging the results of individual tests on four quarterly samples.</p> <p>Verify that community water systems do not exceed the following MCLs:</p> <ul style="list-style-type: none"> <li>- combined radium-226 and radium-228, 5 pCi/L</li> <li>- gross alpha particle activity including radium-226 but excluding radon and uranium, 15 pCi/L.</li> </ul> <p>Verify that, if the gross alpha particle activity is detected at a level greater than 5 pCi/L, the same sample is tested for radium-226.</p> <p>Verify that, if radium-226 is detected at a level greater than 3 pCi/L, the same sample is tested for radium-228.</p> <p>Verify that systems that utilize surface water and serve more than 100,000 persons test for manmade radioactivity every 4 yr.</p> <p>Verify that manmade radioactivity levels are determined by testing a composite of four quarterly samples or averaging the results of individual tests on four quarterly samples.</p> <p>Verify that the water system does not exceed the MCLs for manmade radioactivity specified in Appendix 3-8.</p> <p>Verify that community water systems sample for bacteriological contamination at the minimum frequency listed in Appendix 3-9.</p> <p>Verify that water samples are collected by personnel that meet one of the following qualifications:</p> <ul style="list-style-type: none"> <li>- technical personnel employed by a state-approved environmental laboratory</li> <li>- a certified distribution system operator</li> <li>- a certified treatment plant operator</li> <li>- a sanitarian</li> <li>- an employee of the Department</li> <li>- a person under the direct supervision of either a certified distribution system operator or a certified treatment plant operator.</li> </ul>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>3-10.</b> Noncommunity water systems must meet specific monitoring standards for total coliforms and physical parameters (Regulations of Connecticut State Agencies, Section 19-13-B102(e)(7)(B)).</p> <p><b>3-11.</b> Community and noncommunity water systems must meet specific sampling standards for total coliform and physical parameters (Regulations of Connecticut State Agencies, Section 19-13-B102(e)(7)(C)).</p> <p><b>3-12.</b> Water systems that use unfiltered surface water must meet additional coliform monitoring standards (Regulations of Connecticut State Agencies, Section 19-13-B102(e)(7)(G)).</p>	<p>Verify that noncommunity water systems that meet the following criteria monitor for total coliforms and physical parameters at the frequency specified in Appendix 3-9:</p> <ul style="list-style-type: none"> <li>- systems that utilize only groundwater and serve more than 1000 persons</li> <li>- system that utilize surface water</li> <li>- systems that the Department has determined use groundwater under the direct influence of surface water initiate monitoring at Appendix 3-9 frequencies within 6 mo of the determination.</li> </ul> <p>Verify that noncommunity water systems that utilize only groundwater and serve 1000 or fewer persons monitor for total coliforms and physical parameters during each calendar quarter that the system provides water to the public beginning 29 June 1994.</p> <p>(NOTE: The Department may reduce the monitoring frequencies for non-community groundwater systems that serve 1000 or fewer persons.)</p> <p>Verify that water systems sample at sites that are representative of water throughout the distribution system according to the system's approved written sample siting plan.</p> <p>Verify that monthly samples are collected at regular intervals throughout the month.</p> <p>(NOTE: Systems that use groundwater and serve 1000 or fewer persons may collect all required samples on a single day if they are taken from different sites.)</p> <p>Determine if the water system uses surface water or groundwater under the direct influence of surface water and does not practice filtration.</p> <p>Verify that the water system collects at least one coliform sample at the first service connection each day the turbidity of the source water exceeds 1 NTU.</p> <p>Verify that the system collects the coliform sample within 24 h of the first positive test for coliform unless otherwise waived by the Department.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>3-13.</b> Water systems must not violate MCLs for total coliforms (Regulations of Connecticut State Agencies, Section 19-13-B102(e)(6)(B)).</p> <p><b>3-14.</b> Water systems with a total coliform-positive routine sample must meet repeat monitoring standards (Regulations of Connecticut State Agencies, Section 19-13-B102(e)(7)(F) through (H)).</p>	<p>Verify that the water system does not violate the following MCLs for total coliform:</p> <ul style="list-style-type: none"> <li>- systems collecting at least 40 samples per month, no more than 5 percent of the samples collected during a month are coliform-positive</li> <li>- systems collecting fewer than 40 samples per month, no more than 1 sample collected during a month is total coliform-positive.</li> </ul> <p>(NOTE: Compliance is based on the presence or absence of total coliforms in a sample, rather than coliform density. Compliance is based on a monthly MCL for total coliform.)</p> <p>Determine if the water system has a routine sample that tests total coliform-positive.</p> <p>Verify that the water system collects a repeat sample(s) within 24 h of determining a routine sample is coliform positive.</p> <p>(NOTE: The Department may extend the 24-h limit provided the system verifies that their contract laboratory is closed for the weekend or holidays and the waiver is requested and granted before the original 24-h period has elapsed.)</p> <p>Verify that the water system collects the number of repeat samples listed in Appendix 3-10.</p> <p>Verify that repeat samples are collected as follows:</p> <ul style="list-style-type: none"> <li>- at least one from the site where the coliform-positive sample was detected</li> <li>- at least one taken from a tap within five service connections upstream of the original sample site</li> <li>- at least one taken from a tap within five service connection downstream of the original sample site</li> <li>- for systems that are required to collect four repeat samples, the fourth sample is taken from any distribution sampling point within the system.</li> </ul> <p>Verify that if a total coliform-positive sample is at the end or at the beginning of the distribution system, the system collects one repeat sample at the original sampling point and the other required repeat samples at sampling points within five service connections upstream or downstream from the original sampling point.</p> <p>Verify that all repeat samples are collected on the same day, except where otherwise allowed by the Department.</p> <p>Verify that water systems that collect fewer than five routine samples per month and have one or more total coliform-positive samples, collect at least five routine samples during the next month the system provides water to the public.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>3-15.</b> Water systems with a total coliform-positive repeat sample must conduct additional sampling and meet notification standards (Regulations of Connecticut State Agencies, Section 19-13-B102(e)(7)(F)(vi) and (vii)).</p>	<p>Verify that, if one or more repeat samples are coliform-positive, the water system collects an additional set of repeat samples within 24 h of receipt of positive results.</p> <p>Verify that repeat samples are collected until either total coliforms are not detected in one complete set of repeat samples or the system determines that the MCL for total coliforms has been exceeded and the Department is notified.</p>
<p><b>3-16.</b> Water systems must meet specific fecal coliform and <i>Escherichia coli</i> standards (Regulations of Connecticut State Agencies, Section 19-13-B102(e)(7)(H)).</p>	<p>Verify that if a routine or repeat sample is total coliform-positive, the water system analyzes the total coliform-positive culture medium for the presence of fecal coliform or <i>E. coli</i>.</p> <p>Verify that the Department is notified of positive test results by the end of the day or if the Department office is closed, notification is made before the end of the next business day.</p> <p>(NOTE: Water systems have violated the MCL for total coliforms if a sample is either a repeat sample that is fecal coliform-positive or <i>E. coli</i>-positive; or, a fecal coliform-positive or <i>E. coli</i>-positive original sample is followed by a total coliform-positive sample. This is an acute risk violation of the MCL for total coliforms.)</p>
<p><b>3-17.</b> Water systems that exceed coliform MCLs or violate coliform monitoring standards must meet specific reporting standards (Regulations of Connecticut State Agencies, Section 19-13-B102(h)(1) and (2)).</p>	<p>Verify that water systems that exceed the MCL for total coliforms report the violation to the Department no later than the end of the next business day after it learns of the violation and the public is notified.</p> <p>Verify that systems that fail to comply with a coliform monitoring requirement report the monitoring violation to the Department within 10 days after the system discovers the violation and the public is notified.</p>
<p><b>3-18.</b> Surface water systems must meet specific turbidity standards (Regulations of Connecticut State Agencies, Section 19-13-B102(e)(7)(J)).</p>	<p>Verify that water systems using surface water as a source sample for turbidity at least daily at a point or points representative of water entering the distribution system.</p> <p>Verify that a repeat test is conducted within 1 h or as soon as practical, if a routine sampling for turbidity exceeds the maximum allowable limit.</p> <p>Verify that the Department is notified within 48 h if the repeat turbidity test exceeds the maximum allowable limit.</p> <p>Verify that the Department is notified within 48 h if the monthly average for turbidity exceeds the maximum allowable limit or if the average of two samples taken on two consecutive days exceeds 5 turbidity units.</p>



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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>MONITORING FOR SPECIALLY TREATED WATER</b></p> <p><b>3-19.</b> Water systems that artificially adjust fluoride content must meet specific fluoride monitoring standards (Regulations of Connecticut State Agencies, Section 19-13-B102(e)(7)(K)).</p> <p><b>3-20.</b> Water systems that chlorinate must meet specific free chlorine residual standards (Regulations of Connecticut State Agencies, Section 19-13-B102(e)(7)(L)).</p> <p><b>3-21.</b> Water systems that artificially adjust pH or use corrosion control chemicals must meet specific additional monitoring standards (Regulations of Connecticut State Agencies, Section 19-13-B102(e)(7)(M), and (N)).</p>	<p>Determine if the water system artificially adjusts fluoride content.</p> <p>Verify that the water system tests for fluoride on each source at least daily.</p> <p>Verify that the fluoride content of each source is maintained between 0.8 mg/L and 1.2 mg/L.</p> <p>Verify that if the monthly average of daily fluoride tests are not between 0.8 and 1.2 mg/L, the water systems reports this failure to comply with the regulations.</p> <p>(NOTE: The Department may require the submission of samples of fluoridated sources for testing.)</p> <p>Determine if the water of the water system is chlorinated.</p> <p>Verify that the water system samples daily for chlorine residue.</p> <p>Verify that surface water systems expose water entering the distribution system to at least 0.3 mg/L of free chlorine residual for at least 30 min or the equivalent as determined by the Department.</p> <p>Verify that well systems expose water entering the distribution system to at least 0.2 mg/L of free chlorine residual for at least 10 min or the equivalent as determined by the Department.</p> <p>Verify that water systems that artificially adjust pH, test for pH in the treated water daily or as required by the Department.</p> <p>Verify that water systems that use phosphates or other corrosion control chemicals, test phosphate levels or the other significant chemicals involved in the treatment at least weekly.</p>

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REGULATORY REQUIREMENTS:	REVIEWER CHECKS:
<p><b>MONITORING FOR SYSTEMS THAT FILTER AND DISINFECT</b></p> <p><b>3-22.</b> Surface water systems and designated groundwater systems must meet minimum removal/inactivation standards for viruses and <i>Giardia lamblia</i> cysts (Regulations of Connecticut State Agencies, Section 19-13-B102(j)(1), (2)(A), and (2)(B)).</p> <p><b>3-23.</b> Surface water systems and designated groundwater systems must install filtration and provide disinfection (Regulations of Connecticut State Agencies, Section 19-13-B102(j)(2)(D) and (j)(3)(A)).</p>	<p>Verify that water systems using surface water or groundwater under the direct influence of surface water operate water treatment processes that reliably achieve the following:</p> <ul style="list-style-type: none"> <li>- at least 99.9 percent (3-LOG) removal and/or inactivation of <i>Giardia lamblia</i> cysts between a point where the raw water is not subject to recontamination by surface water runoff and a point downstream before or at the first customer</li> <li>- at least 99.99 percent (4-LOG) removal and/or inactivation of viruses between a point where the raw water is not subject to recontamination by surface water runoff and a point downstream before or at the first customer.</li> </ul> <p>(NOTE: Surface water sources or groundwater sources under the direct influence of surface water are considered to be compliant with virus and <i>Giardia lamblia</i> cyst removal/inactivation if it meets the filtration and disinfection requirements.)</p> <p>Determine if the water system is either a surface water system, a groundwater system under the direct influence of surface water, or a system determined by the Department to use groundwater sources that are at risk of contamination from <i>Giardia lamblia</i>.</p> <p>Verify that the water system installed filtration by 29 June 1993 or within 18 mo of the Department's determination.</p> <p>Verify that the water system that installed filtration provided disinfection by 29 June 1993 or when filtration is installed, whichever is later.</p> <p>Verify that groundwater systems required by the Department to install filtration do not exceed 5 NTUs as an interim requirement until the filtration is operational.</p> <p>(NOTE: Interim turbidity levels are to be measured on a representative sample of the source water immediately prior to the first or only point of disinfection application and the system must be free of any waterborne disease outbreak. The Department will specify interim disinfection requirements until the filtration is installed.)</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>3-24.</b> Surface water systems and groundwater systems required to provide disinfection treatment must meet specific residual disinfection standards (Regulations of Connecticut State Agencies, Section 19-13-B102(j)(3)(B)).</p> <p><b>3-25.</b> Surface water systems and groundwater systems required to provide filtration treatment must meet specific turbidity standards (Regulations of Connecticut State Agencies, Section 19-13-B102(j)(4)).</p> <p><b>3-26.</b> Water systems that provide filtration treatment must meet specific monitoring standards (Regulations of Connecticut State Agencies, Section 19-13-B102(j)(5)).</p>	<p>Verify that a residual disinfection concentration in the water entering the distribution system is not less than 0.2 mg/L for more than 4 h.</p> <p>Verify that the residual disinfectant concentration in the distribution system, measured as free chlorine, combined chlorine, or chlorine dioxide is not undetectable in more than 5 percent of the samples each month, for any 2 consecutive months that the system serves water to the public.</p> <p>Verify that water in the distribution system with a heterotrophic plate count (HPC) less than or equal to 500/mL has a detectable disinfectant residual and the value of V as determined by the formula in Appx. 3-11 does not exceed 5 percent in 1 mo, for any 2 consecutive months.</p> <p>Verify that water systems use conventional filtration, direct filtration, slow sand filtration, diatomaceous filtration, or other Department-approved filtration technologies.</p> <p>Verify that water system monitor turbidity levels in samples representative of the system's filtered water.</p> <p>Verify that water systems that use conventional treatment or direct filtration do not exceed a turbidity level of 0.5 NTU in at least 95 percent of the measurement taken each month unless otherwise specified by the Department.</p> <p>Verify that water systems using slow sand filtration or diatomaceous earth filtration have turbidity levels are less than or equal to 1 NTU for all measurements taken each month.</p> <p>Determine if the water systems uses a surface water source or a groundwater source under the direct influence of surface water and provides filtration treatment.</p> <p>(NOTE: The Department determines interim monitoring standards prior to the installation of filtration.)</p> <p>Verify that the water system begins monitoring the filtration and disinfection treatment by 29 June 1993 or when filtration is installed, whichever is later.</p> <p>Verify that turbidity measurements are taken by a continuous turbidity analyzer for the time that the system serves water to the public.</p> <p>Verify that the accuracy and reliability of the continuous turbidity analyzer is validated on a daily basis.</p> <p>Verify that the residual disinfectant concentration of the water entering the distribution system is monitored continuously and the lowest value recorded daily.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<b>3-26. (continued)</b>	<p>(NOTE: If there is a failure of the continuous monitoring equipment, grab sampling every 4 h may be conducted in lieu of continuous monitoring, but for no more than 5 working days following the equipment failure.)</p> <p>Verify that residual disinfectant concentrations are measured at the same points in the distribution system and at the same time as total coliforms are samples.</p> <p>(NOTE: Heterotrophic bacteria, measured as HPC may be measured in lieu of residual disinfectant.)</p>
<b>3-27.</b> Water systems that provide filtration treatment must meet additional reporting standards (Regulations of Connecticut State Agencies, Section 19-13-B102(j)(6)).	<p>Determine if the water systems uses a surface water source or a ground-water source under the direct influence of surface water and provides filtration treatment.</p> <p>(NOTE: The Department determines interim reporting standards prior to the installation of filtration.)</p> <p>Verify that the water system reports the filtration monitoring information monthly to the Department beginning 29 June 1993 or when filtration is installed, whichever is later.</p> <p>Verify that turbidity measurements are reported within 9 calendar days after the end of each month the system serves water to the public and includes the following information:</p> <ul style="list-style-type: none"> <li>- the number of filtered water turbidity measurements taken during the month</li> <li>- the number and percentage turbidity measurements that are less than or equal to the specified turbidity limits</li> <li>- the date and value of any turbidity measurements that exceed 5 NTU.</li> </ul> <p>Verify that disinfection information is reported to the Department within 9 calendar days after the end of each month the system serves water to the public and includes the following information:</p> <ul style="list-style-type: none"> <li>- for each day, the lowest measurement of residual disinfection concentration.</li> <li>- the dates and duration of each period the residual disinfectant concentration fell below 0.2 mg/L and when the Department was notified.</li> </ul> <p>Verify that the following information is submitted on the samples taken in the distribution system in conjunction with total coliform monitoring:</p> <ul style="list-style-type: none"> <li>- the number of instances where the residual disinfectant concentration is measured</li> <li>- the number of instances where the residual disinfection concentration is not measured but HPC is measured</li> <li>- the number of instances where the residual disinfectant concentration is measured but not detected and no HPC is measured</li> </ul>

<b>COMPLIANCE CATEGORY:</b> <b>SAFE DRINKING WATER ACT (SDWA)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<b>3-27. (continued)</b>	<ul style="list-style-type: none"> <li>- the number of instances where no residual disinfectant concentration is detected and where HPC is greater than 500/mL</li> <li>- the number of instances where the residual disinfectant concentration is not measured and HPC is greater than 500/mL</li> <li>- the value of V specified in the formula in Appendix 3-11 for the current and previous month the system served water to the public.</li> </ul> <p>Verify that systems upon discovering the outbreak of a waterborne disease report the occurrence to the Department as soon as possible, but no later than by the end of the next business day.</p> <p>Verify that the Department is notified as soon as possible but no later than by the end of the next business day when any of the following occurs:</p> <ul style="list-style-type: none"> <li>- the turbidity exceeds 5 NTU</li> <li>- the disinfection residual falls below 0.2 mg/L in the water entering the distribution system</li> <li>- disinfection residuals that are restored to 0.2 mg/L within 4 h from the time of discovery of insufficient chlorine residual.</li> </ul>
<b>WATER SYSTEM SURVEY</b>	
<b>3-28.</b> Water systems must meet sanitary survey standards (Regulations of Connecticut State Agencies, Section 19-13-B102(e)(7)(D)).	<p>Verify that public water systems that collect fewer than five bacteriological samples per month conduct sanitary surveys at the frequency listed below:</p> <ul style="list-style-type: none"> <li>- community water systems are to complete the initial survey by 29 June 1994 and conduct subsequent surveys once every 5 yr</li> <li>- noncommunity water systems are to complete the initial survey by 29 June 1999 and conduct subsequent surveys once every 5 yr</li> </ul> <p>Verify that sanitary surveys are conducted by the Department or an agent approved by the Department.</p> <p>(NOTE: The Department may allow noncommunity water systems that use only protected and disinfected groundwater sources to conduct the sanitary survey once every 10 yr rather than once every 5 yr.)</p>
<b>WATER DISTRIBUTION SYSTEMS</b>	
<b>3-29.</b> Installations must protect the water distribution system (Regulations of Connecticut State Agencies, 19-13-B102(f)).	<p>Verify that all service connections have a water pressure at the main of at least 25 psi under normal conditions.</p>

**COMPLIANCE CATEGORY:**  
**SAFE DRINKING WATER ACT (SDWA)**  
**Connecticut Supplement**

<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>3-29. (continued)</b></p>	<p>Verify that suppliers of water to a community water system report to the State Health Department by 1 March of each year covering the preceding calendar year a list of premises when:</p> <ul style="list-style-type: none"> <li>- a private source of water supply is known to exist</li> <li>- toxic, objectionable chemical, or biological substances are used</li> <li>- water pressure is raised by pumping on other than residential premises above that furnished by the supplier</li> <li>- there is a water storage tank for other than residential use, a commercial swimming pool, or a commercial water filter</li> <li>- there is known to be a sprinkler system for either fire protection or irrigation.</li> </ul> <p>Verify that suppliers of water to a community water system report to the State Health Department by 1 March of each year covering the preceding calendar year the following information concerning the list of premises:</p> <ul style="list-style-type: none"> <li>- the date of the last inspection of each consumer premise inspected</li> <li>- the number of public health code violations relating to the water distribution systems and the correction status of these violations.</li> </ul> <p>Verify that premises at which toxic, objectionable chemicals, or biological substances are used are inspected at least once every year and all other premises are inspected every 5 yr.</p> <p>Verify that all water storage tanks connected to a public water distribution system are constructed and located to provide adequate protection of the water from contamination, including:</p> <ul style="list-style-type: none"> <li>- screens covering the vents and overflow pipes</li> <li>- nondirect connections to sanitary sewer or storm drain</li> <li>- inground basins or tanks are required to be at least 50 ft from the nearest subsurface sewage disposal system</li> <li>- inground basins or tanks are required to be at least 20 ft from the nearest sanitary sewer.</li> </ul> <p>Verify that existing uncovered tanks or basins meet the following requirements:</p> <ul style="list-style-type: none"> <li>- a free chlorine residual of at least 0.2 mg/L is maintained and tested for on a daily basis</li> <li>- water leaving the tank meets physical and microbiological standards and is measured at least once a week.</li> </ul> <p>Verify that the water distribution system is maintained free from excessive accumulation of sediment, organic growth, products that cause corrosion and erosion, and other extraneous matter.</p>

COMPLIANCE CATEGORY: SAFE DRINKING WATER ACT (SDWA) Connecticut Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS:
<b>LABORATORY AND OPERATING TESTS</b>  <b>3-30.</b> Water systems must meet laboratory and operating test standards (Regulations of Connecticut State Agencies, Section 19-13-B102(g)).          <b>REPORTING, RECORDKEEPING, AND PUBLIC NOTIFICATION</b>  <b>3-31.</b> Suppliers of water must meet specific reporting standards (Regulations of Connecticut State Agencies, Section 19-13-B102(h)(3) and (4)).   <b>3-32.</b> Water systems must meet specific recordkeeping standards (Regulations of Connecticut State Agencies, Section 119-13-B102(l)).	<p>Verify that required laboratory tests are conducted and reported to the supplier of water by a laboratory approved by the Department.</p> <p>Verify that tests conducted for the control of treatment processes are made by or under the supervision of operators who have been properly certified by the State Commissioner of Health Services.</p> <p>(NOTE: Continuous analyzers may be used if the instruments are approved by the Department and are maintained by a certified plant operator.)</p>          <p>Verify that, except where a different reporting period is specified, the supplier of water reports to the Department within 48 h of any failure to comply with any established USEPA MCL.</p> <p>Verify that a monthly report is submitted to the Department no later than 9 calendar days following the end of each month and contains the results of tests made during the month.</p>   <p>Verify that specific records are maintained for the following minimum time lengths:</p> <ul style="list-style-type: none"> <li>- bacteriological analyses, 5 yr</li> <li>- chemical analyses, 10 yr</li> <li>- actions taken by the system to correct violations of primary drinking water regulations, 3 yr after the last action taken for the particular violation</li> <li>- copies of written reports, summaries, or communications relating to sanitary surveys, 10 yr</li> <li>- variance or exemption records, 5 yr following the expiration of the variance or exemption.</li> </ul>  <p>Verify that community water systems maintain accurate and up-to-date maps showing the location of all mains, valves, hydrants, service connections, and other facilities, including pumps, tanks, and treatment plants.</p> <p>Verify that an integrated map of the system showing supply, treatment, pumping and storage facilities and major mains is filed with the Department of Health Services and updated at least every 5 yr.</p>

<b>COMPLIANCE CATEGORY:</b> <b>SAFE DRINKING WATER ACT (SDWA)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<b>3-32. (continued)</b>	<p>Verify that if actual bacteriological or chemical laboratory reports are transferred to tabular summaries, they include the following information:</p> <ul style="list-style-type: none"> <li>- the date, time, and place of sampling</li> <li>- the name of the person taking the sample</li> <li>- the date of analysis</li> <li>- the laboratory and person responsible for performing the analysis</li> <li>- the analytical technique or method used</li> <li>- the result of the analysis.</li> </ul> <p>Verify that records are maintained onsite or at a convenient location near the site.</p>
<b>3-33. Suppliers of water must meet specific public notification standards (Regulations of Connecticut State Agencies, Section 19-13-B102(i)).</b>	<p>Verify that suppliers of water to a community water system give written notice to persons served by the system of any exemptions or variance granted, any failure on the part of the system to comply with requirements including monitoring requirements excluding color, odor, and pH requirements.</p> <p>Verify that the notice is in the first set of bills following the failure or granting of variance or exemption and not less than once every 3 mo for the duration of the noncompliance.</p> <p>(NOTE: If the system issues water bills less frequently than quarterly or does not issue water bills, the notice is made or supplemented by another form of direct mail.)</p> <p>Verify that community water systems that fail to comply with a MCL provide public notice by the following means:</p> <ul style="list-style-type: none"> <li>- by publication for not less than three consecutive days in a newspaper or newspapers of general circulation in the area served by the water system within 14 days of the failure</li> <li>- by radio or television serving the area served by the water system within 7 days of the failure.</li> </ul> <p>Verify that water suppliers other than community water systems that have an exemption or variance or a failure to comply with regulations provide public notification by posting a description of the infraction in a prominent manner on the premises served during the period that the infraction continues.</p> <p>Verify that notices easily read and understandable by the general public and bilingual in areas designated by the state health department.</p>



**COMPLIANCE CATEGORY:  
SAFE DRINKING WATER ACT (SDWA)  
Connecticut Supplement**

<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>WATER USE MONITORING</b></p> <p><b>3-34.</b> Installations are required to monitor water source usage rates (Regulations of Connecticut State Agencies, Section 19-13-B102(n)).</p>	<p>Verify that community water systems measure the amount of water delivered to the distribution system at all sources of water.</p> <p>Verify that water systems maintain records of representative weekly readings of instantaneous flow rate and total quantity of water delivered.</p> <p>Verify that water systems maintaining a reservoir submit records of reservoir status to the Department that includes at least weekly measurements of water elevation, instantaneous usable storage capacity, reservoir withdrawals, and the amount of precipitation.</p> <p>Verify that water systems with a groundwater source in an unconsolidated unconfined aquifer submit records of groundwater status to the Department that includes at least weekly measurements of instantaneous pumping rates and groundwater elevations.</p> <p>Verify that water systems serving more than 1000 persons, more than 250 service connections, or specified by the Department submit to the Department records of water use that includes at least weekly measurements of the volume of water withdrawn from each source and for the total system.</p>
<p><b>WATER SYSTEM DESIGN</b></p> <p><b>3-35.</b> Water systems must meet supply and safe yield standards (Regulations of Connecticut State Agencies, Section 19-13-B102(o) and (s)).</p>	<p>Verify that the supply capacity of community water systems is maintained in excess of the demand placed on the system, with a sufficient margin of safety to allow for:</p> <ul style="list-style-type: none"> <li>- sudden increase in consumption, which may occur in a dry season</li> <li>- the time required to bring a new source on line</li> <li>- increase or growth in the service area.</li> </ul> <p>Verify that community water systems have prepared a plan relating the safe yield of the supply system to the existing and projected demands of the supply area.</p> <p>Verify that the plan is updated on a regular basis.</p> <p>Verify that water systems have a Department of Health Services approved program established to reduce the amount of water that cannot be accounted for and includes the following:</p> <ul style="list-style-type: none"> <li>- calibration of supply line and main line meters</li> <li>- calibration of consumer line meters</li> <li>- pipeline flow measurements</li> <li>- leakage surveys</li> <li>- inspection of bleeders.</li> </ul>

**COMPLIANCE CATEGORY:**  
**SAFE DRINKING WATER ACT (SDWA)**  
**Connecticut Supplement**

<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>3-36.</b> Water systems must meet emergency standards (Regulations of Connecticut State Agencies, Section 19-13-B102(r)).</p>	<p>Verify that all customers served by a community water system are notified at least annually of an emergency number which is continuously available for reporting service problems.</p> <p>Verify that community water systems have sufficient crew spare parts, clean up, and disinfectant equipment available to deal with emergencies.</p>



### Appendix 3-1

#### Maximum Inorganic Chemical Levels for Untreated Water (Regulations of Connecticut State Agencies, Section 19-13-B102(c)(3))

Contaminant	Degree of Treatment	
	Disinfection and Chemical Treatment (mg/L)	Filtration (mg/L)
Arsenic	0.05	0.05
Barium	1.0	1.0
Cadmium	0.01	0.01
Chloride	250	250
Chromium	0.05	0.05
Copper	0.5	1.0
Cyanide	0.01	0.2
Fluoride	2.0	2.0
Lead	0.05	0.05
MBAS	0.5	0.5
(methylene blue active substances)		
Mercury	0.002	0.005
Nitrate plus	10	10
Nitrate as N		
Selenium	0.01	0.01
Silver	0.05	0.05



## Appendix 3-2

### Maximum Pesticide Levels for Untreated Water (Regulations of Connecticut State Agencies, Section 19-13-B102(c)(4))

Constituent	Level (mg/L)
Chlorinated hydrocarbons:	
Endrin (1,2,3,4,10, 10-hexa-chloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-1,4-endo-5,8-dimethano naphthalene)	0.0002
Lindane (1,2,3,4,5,6-hexachloro-cyclohexane, gamma isomer)	0.004
Methoxychlor (1,1,1-Trichloro-2,2-bis (p-methoxyphenyl) ethane)	0.1
Toxaphene (C <sub>10</sub> H <sub>10</sub> Cl <sub>8</sub> ) Technical chlorinated camphene, 67-69 percent chlorine)	0.005
Chlorophenoxys:	
2,4-D (2,4-Dichlorophenoxyacetic acid)	0.1
2,4,5-TP Silver (2,4,5-Trichloro-phenoxypropionic acid)	0.01



### **Appendix 3-3**

#### **Treatment Plant Effluent Odor Scale** (Regulations of Connecticut State Agencies, Section 19-13-B102(e)(1))

- 0 - None
- 1 - Very Faint
- 2 - Faint
- 3 - Distinct
- 4 - Decided
- 5 - Strong





### Appendix 3-4

#### Maximum Inorganic Chemical Levels

(Regulations of Connecticut State Agencies, Section 19-13-B102(e)(2))

Contaminant	MCL (mg/L)
Arsenic	0.05
Barium	1
Cadmium	0.01
Chromium	0.05
Cyanide	0.02
Fluoride	2.0
Lead	0.05
Mercury	0.002
Nitrite Nitrogen	1.0 as (N)
Nitrate Nitrogen plus Nitrate Nitrogen	10 as (N)
Selenium	0.01
Silver	0.05
Sodium*	28
Copper	1
Chlorides	250

\* When exceeded, consumers are to be notified.



### Appendix 3-5

#### Maximum Pesticides and Herbicide Levels for Community and Noncommunity Systems

(Regulations of Connecticut State Agencies, Section 19-13-B102(e)(3)(A))

Chemical	MCL (mg/L)
Endrin	0.0002
Lindane	0.004
Methoxychlor	0.100
Toxaphene	0.005
2,4 Dichlorophenoxy/Acetic acid	0.100
2,4,5-TP (Silvex)	0.010
1,2 Dibromomethane (Ethylene Dibromide)	0.00010



### Appendix 3-6

#### Maximum Organic Chemical Levels for Community and Nontransient Noncommunity Systems

(Regulations of Connecticut State Agencies, Section 19-13-b102(e)(4)(A))

Chemicals	MCLs (mg/L)
1,1,1-Trichloroethane	0.200
1,1,2-Trichloroethane	**
1,1,1,2-Tetrachloroethane	**
1,1,2,2-Tetrachloroethane	**
1,1-Dichloroethane	**
1,1 Dichloroethylene	0.007
1,2,3-Trichloropropane	**
1,2,3-Trimethylbenzene	**
1,2,4-Tromethylbenzene	**
1,3,5-Trimethylbenzene	**
1,2- Dichloroethane (EDC)	0.001
1,2-Dibromo-3-Chloroprane (DBCP)	**
1,2 Dibromoethane (Ethylene Dibromide, EDB)	0.0001
1,2-Dichloropropane	**
1,3-Dichloropropane	**
1,1-Dichloropropene	**
2,2-Dichloropropane	**
1,3-Dichloropropene	**
Benzene	0.005
Bromobenzene	**
Bromomethane	**
Carbon Tetrachloride	0.005
Chlorobenzene	**
Chloroethane	**
Chloromethane	**
Cis-1,2-Dichloroethylene	**
Dibromomethane	**
Dichloromethane (Methylene chloride)	**
Ethylbenzene	**
Styrene	**
Tetrachloroethylene	0.005
Trichloroethylene	0.005
Toluene	**
Trans-1,2-Dichloroethylene	**
m-Dichlorobenzene	**
Methyl Tert butyl-Ether (MTBE)	**
m-Xylene	**

**Appendix 3-6 (continued)**

<b>Chemicals</b>	<b>Maximum Contamination Level (mg/L)</b>
Napthalene	**
n-Butyl Benzene	**
n-Propyl Benzene	**
o-Chlorotoluene	**
o-Dichlorobenzene	**
o-Xylene	**
p-Dichlorobenzene	0.075
p-Chlorotoluene	**
p-Xylene	**
Total Trihalomethanes (TTHM)	0.1
Bromodichloromethane	*
Bromoform	*
Chlorodibromomethane	*
Chloroform	*
V... Chloride	0.002

\* The MCL for Total Trihalomethanes (TTHM) is 0.1 mg/L, this is the sum of the four constituent trihalomethanes.

\*\* The MCL has not been established for this chemical.

(NOTE: The method detection limit for all organic chemicals is 0.0005 mg/L with the exception of 1,2-Dibromoethane (Ethylene Dibromide, EDB), 1,2-Dibromo-3-Chloropropane (DBCP), and Methyl Tert butyl-Ether (MTBE) which have a method detection limit of 0.00002 mg/L, 0.00002 mg/L and 0.002 mg/L, respectively.)

## Appendix 3-7

### Monitoring Frequencies for Organic Chemicals (Regulations of Connecticut State Agencies, Section 19-13-B102(e)(4)(B)(iii))

System Population	Status	Groundwater Sources Frequency	Surface Water Sources Frequency
Less than 1000 persons served.	Organic Chemicals not Detected	Every 3 yr	Annually
Less than 1000 persons served.	Organic Chemicals with MCLs Detected	Quarterly <sup>1,2,3</sup>	Quarterly <sup>3</sup>
Less than 1000 persons served.	Organic Chemicals without MCLs Detected	Frequency to be established on a case by case basis when the Department determines that contamination poses a danger to the health of the consumers.	
Greater than 1000 persons served.	Organic Chemicals not Detected	Annually	Annually
Greater than 1000 persons served.	Organic Chemicals with MCL's Detected	Quarterly <sup>1,2,3</sup>	Quarterly <sup>1,2,3</sup>
Greater than 1000 persons served.	Organic Chemicals without MCLs Detected	Frequency to be established on a case by case basis when the Department determines that contamination poses a danger to the health of the consumers.	

- <sup>1</sup> - More frequent testing may be required by the Department based upon potential health risks to consumers.
- <sup>2</sup> - A minimum of quarterly testing must continue for 3 yr. If during that period the results are consistently below an MCL, monitoring may be reduced to annually with the approval of the Department at the end of the 3-yr period.
- <sup>3</sup> - When a chemical(s) with an MCL is detected at a level exceeding the MCL, monitoring must be increased to at least monthly.





### Appendix 3-8

#### Maximum Contamination Levels for Manmade Radioactivity (Regulations of Connecticut State Agencies, Section 19-13-B102(e)(5))

Contaminant	Average Annual Maximum Allowable Level
Dose equivalent of beta particles plus photon radioactivity	4 mrem**
or	
Gross beta particle activity	50 pCi/L
Tritium	20,000 pCi/L
Strontium-90	8 pCi/L
Dose equivalent of Tritium plus Strontium-90	4 mrem

\* pCi - picoCurie

\*\* mrem - millirems



### Appendix 3-9

#### **Total Coliform Monitoring Frequencies for Community Water Systems** (Regulations of Connecticut State Agencies, Section 19-13-B102(e)(7)(A))

<b>Population Served</b>	<b>Minimum Routine Samples per Month</b>
25-1000	1
1001-2500	2
2501-3300	3
3301-4100	4
4101-4900	5
4901-5800	6
5801-6700	7
6701-7600	8
7601-8500	9
8501-12,900	10
12,901-17,200	15
17,201-21,500	20
21,501-25,000	25
25,001-33,000	30
33,001-41,000	40
41,001-50,000	50
50,001-59,000	60
59,001-70,000	70
70,001-83,000	80
83,001-96,000	90
96,001-130,000	100
130,001-220,000	120
220,001-320,000	150
320,001-450,000	180
450,001-600,000	210
600,001-780,000	240
780,001-970,000	270



## Appendix 3-10

### Total Coliform Repeat Sampling Requirements

(Regulations of Connecticut State Agencies, Section 19-13-B102(e)(7)(F)(i),  
Table 2)

Routine Samples per Month	Number of Repeat Samples <sup>1</sup>	Number of Routine Samples Next Month <sup>2</sup>
1 or fewer	4	5
2	3	5
3	3	5
4	3	5
5 or more	3	Appendix 3-9 <sup>3</sup>

<sup>1</sup> Number of repeat samples in the same month for each total coliform-positive routine sample.

<sup>2</sup> Except where the Department has invalidated the original routine sample.

<sup>3</sup> Systems need not take any additional samples beyond those required to take according to Appendix 3-9.



## Appendix 3-11

### Determination of "V"

(Regulations of Connecticut State Agencies, Section 19-13-B102(j)(3))

$$V = \frac{C+D+E}{A+B} \times 100$$

A = The number of instances in which the residual disinfectant concentration is measured.

B = The number of instances in which the residual disinfectant concentration is not measured but the heterothropic bacteria plate count (HPC) is measured.

C = The number of instances in which the residual disinfectant concentration is measured but not detected and no HPC is measured.

D = The number of instances in which no residual disinfectant concentration is detected and in which the HPC is greater than 500/mL.

E = The number of instances in which the residual disinfection concentration is not measured and the HPC is greater than 500/mL.





<b>INSTALLATION:</b>	<b>COMPLIANCE CATEGORY:</b> <b>SAFE DRINKING WATER ACT (SDWA)</b> Connecticut Supplement	<b>DATE:</b>	<b>REVIEWER(S):</b>
<b>STATUS</b> NA   C   RMA	<b>REVIEWER COMMENTS:</b>		

**SECTION 4**

**RESOURCE CONSERVATION AND RECOVERY ACT,**

**SUBTITLE C (RCRA-C)**

**Connecticut Supplement**

**SECTION 4**  
**RESOURCE CONSERVATION AND**  
**RECOVERY ACT, SUBTITLE C (RCRA-C)**  
**Connecticut Supplement**

The State of Connecticut is responsible for its own hazardous waste regulation. For many sections, however, the Federal regulations have been incorporated by reference.

The following Federal regulations have been incorporated by reference into the Connecticut Department of Environmental Protection, Waste Management Bureau, Hazardous Waste Management Regulations 22a-449(c)-100 through 110 and 22a-449(c)-11. All applicable changes to the incorporation of Federal regulations have been included in this protocol. All applicable requirements in addition to the Federal regulations which have been incorporated by reference are included in this protocol.

40 CFR Part 260, Hazardous Waste Management Systems, is incorporated in its entirety with specified changes, except for 40 CFR 260.10 and the definition of Small Quantity Generator (SQG) in 40 CFR 260.10.

40 CFR Part 261, Identification and Listing of Hazardous Waste, is incorporated in its entirety with specified changes, except for 40 CFR 261.1(c)(8) (which relates to materials accumulated speculatively) and 40 CFR 261.4(b)(6) (which excludes waste failing the EP toxicity test because chromium is present).

40 CFR Part 262, Standards Applicable to Generators of Hazardous Waste, is incorporated in its entirety with specified changes, except for 40 CFR 262.20(e) (which exempts a SQG from the manifesting requirements provided the SQG has a contractual agreement with a reclaimer).

40 CFR Part 263, Standards Applicable to Transporters of Hazardous Waste, is incorporated in its entirety, except for 40 CFR 263.12 (which allows transporters to store hazardous waste for a period of ten days without being subject to regulation under 40 CFR Parts 270, 264, 265, and 268) and 40 CFR 263.20(h) (which exempts a transporter from complying with 263.20 provided waste is transported from a SQG that has a reclamation agreement).

40 CFR Part 264, Standards for Hazardous Waste Treatment, Storage, and Disposal Facilities is incorporated in its entirety, except for 40 CFR 264.1(d) and 40 CFR 264.1(f)(1) (which relate to underground injection), 40 CFR 264.90(b) (which provides for an exemption for certain types of units for releases into the uppermost aquifer), and 40 CFR 264.314(d)(1) & (3) (which relates to placing free liquids in landfills).

40 CFR Part 265, Interim Status Standards for Hazardous Waste Treatment, Storage, and Disposal Facilities, is incorporated in its entirety, except for 40 CFR 265.90(c) (which provides for a waiver of groundwater monitoring requirements), 40 CFR 265.90(e) (which provides for a waiver for surface impoundments under specific conditions), 40 CFR 265.201(b)(3) (which allows SQGs to operate uncovered tanks with 60 cm of freeboard), 40 CFR 265.201(e)(1)(iii) (which allows SQGs to store ignitable and/or reactive waste in a tank used solely for emergencies), 40 CFR 265.314(c)(1) & (2) (which relates to placing free liquids in landfills), and 40 CFR 265 Subpart R (which relates to underground injection).

40 CFR Part 266 Subpart G, Spent Lead-Acid Batteries Being Reclaimed, is incorporated in its entirety, except for specific changes to 40 CFR 266.80(a).

## Definitions

These definitions were obtained from the Connecticut Hazardous Waste Management Regulations 22a-449(c)-100 through 104 and are either different from or in addition to the definitions found in the Federal regulations and the U.S. Environmental Compliance Assessment System (ECAS) manual.

- *Accumulated Speculatively* - a material accumulated before being recycled. A material is not accumulated speculatively, however, if the person accumulating it can show that:
  1. the material is potentially recyclable
  2. the material has a feasible means of being recycled
  3. the material is recycled within 1 yr of the date on which accumulation of that material begins.

To demonstrate that a material is recycled within one year, the date upon which each period of accumulation begins must be clearly marked and visible for inspection on each container or tank.

- *Chemical Liquids* - any chemical, chemical solution, or chemical mixture in liquid form.
- *Commissioner* - the Commissioner of Environmental Protection of the State of Connecticut.
- *Department* - the Connecticut Department of Environmental Protection.
- *Hazardous Waste* - any waste material which may pose a present or potential hazard to human health or the environment when improperly treated, stored, transported or disposed of or otherwise managed including hazardous waste identified in accordance with Section 3001 of the *Resource Conservation and Recovery Act* (RCRA) of 1976 (42 U.S. Code (USC) 6901 et seq.)
- *Impermeable or Impervious* - a natural in-place soil or emplaced soil material having a permeability of less than or equal to  $1.0 \times 10^{-7}$  cm/s, and, in the case of an artificial liner, the liner and its construction and use have been approved in writing by the Commissioner.
- *Manifest Document Number* - the U.S. Environmental Protection Agency (USEPA) 12 digit identification number assigned to the generator plus a unique five digit document number assigned to the manifest by the generator for recording and reporting purposes, and the number printed on the Manifest prescribed by the Commissioner.
- *Oil or Petroleum* - oil or petroleum of any kind or in any form including, but not limited to, waste oils and distillation products such as fuel oil, kerosene, naphtha, gasoline and benzene, or their vapors.
- *Release* - any discharge, as defined by 40 CFR 260.10, or any migration of substances from a waste or combination of wastes into the environment.
- *Residential Boiler* - any boiler that is used in whole or in part to heat a residential building.
- *Residential Building* - any house, apartment, apartment complex with four or less units, condominium complex with four or less units, cooperative complex with four or less units, trailer, mobile home, or other structure occupied by individuals as a dwelling.

- *Small Quantity Generator (SQG)* - a generator who generates more than 100 but less than 1000 kg of hazardous waste in a calendar month, provided that such waste does not include more than:
  1. a total of 1 kg of acute hazardous waste listed in 40 CFR Sections 261.31, 261.32, or 261.33(e)
  2. a total of 100 kg of any residue or contaminated soil, waste, or other debris resulting from the clean-up of a spill, into or on any land or water, of any acute hazardous wastes listed in 40 CFR Sections 261.31, 261.32, or 261.33(e), provided that there is no more than a total of 1 kg of acute hazardous waste contained in that residue, soil, waste or debris.
- *Waste Oil* - oil having a flash point at or above 140 °F (60 °C) which is no longer suitable for which it was manufactured due to the presence of impurities or a loss of original properties including, but not limited to, crude oil, fuel oil, lubricating oil, kerosene, diesel fuels, cutting oil, emulsions, hydraulic oils, polychlorinated biphenyls (PCBs), and other halogenated oils that have been discarded as waste or are recovered from oil separators, oil spills, tank bottoms, or other sources.



**RESOURCE CONSERVATION AND RECOVERY ACT, SUBTITLE C (RCRA-C)**  
**GUIDANCE FOR CONNECTICUT CHECKLIST USERS**

<b>Applicability:</b>	<b>Refer to Checklist Items:</b>
Hazardous Waste Generators - General Requirements	4-1
Hazardous Waste Generators - Small Quantity Generators (SQGs)	4-2
Hazardous Waste Generators - Conditionally Exempt Small Quantity Generators (SQGs)	4-3
Hazardous Waste Transporters - General Requirements	4-4 through 4-8
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDFs) - Additional Requirements	4-9 and 4-10
State Regulated Wastes	4-11





<b>COMPLIANCE CATEGORY:</b> <b>Resource Conservation &amp; Recovery Act, Subtitle C (RCRA-C)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>HAZARDOUS WASTE GENERATORS - GENERAL REQUIREMENTS</b></p> <p><b>4-1.</b> Installations that generate hazardous waste must meet specific requirements (Connecticut Hazardous Waste Management Regulations (CHWMR) Section 22a-449(c)-102(b)).</p>	<p>Verify that the installation never accumulates more than 1000 kg of hazardous waste onsite.</p> <p>(NOTE: An installation that accumulates more than 100 kg of hazardous waste onsite is considered by Connecticut law to be a hazardous waste storage facility and is required to comply with all permitting and operating requirements applicable to a storage facility.)</p> <p>Verify that during accumulation each container of hazardous waste at the accumulation site is marked with the words <b>HAZARDOUS WASTE</b> and any other words that identify the contents of the container or tank, such as the chemical name.</p> <p>Verify that if the installation ships hazardous waste offsite, three copies of a biennial report are sent to the USEPA Regional Administrator by 1 March of each even numbered year, as required by Federal regulations.</p> <p>Verify that hazardous waste is offered for transport offsite only to a transporter with a current Connecticut transporter permit.</p> <p>Verify that the installation complies with all Federal requirements for hazardous waste storage areas.</p> <p>Verify that the installation manifests shipments and provides copies of completed manifests to those persons specified by Federal requirements (40 CFR 262.22) and those persons specified by the Commissioner on the manifest form.</p> <p>Verify that the installation completes manifest forms which have been approved by the Commissioner and that the forms are completed as specified on the manifest form.</p> <p>Verify that a copy of each hazardous waste manifest is sent to the Commissioner within 7 days of the date on which the transporter accepts and signs the manifest.</p>

<b>COMPLIANCE CATEGORY:</b> <b>Resource Conservation &amp; Recovery Act, Subtitle C (RCRA-C)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>HAZARDOUS WASTE GENERATORS - SMALL QUANTITY GENERATORS (SQGs)</b></p> <p>4-2. SQGs must meet specific requirements (CHWMR, Section 22a-449(c)-102(c)).</p>	<p>(NOTE: In addition to the Federal definition of a SQG, a generator who accumulates a total of 100 kg of any residue or contaminated soil, waste, or other debris resulting from the clean-up of a spill, into or on any land or water, of any acute hazardous wastes, provided that there is no more than a total of 1 kg of acute hazardous waste contained in that residue, soil, waste, or debris, is considered a SQG in Connecticut.)</p> <p>Determine if the installation is a SQG.</p> <p>Verify that the installation complies with all requirements for hazardous waste generators (see item 4-1).</p> <p>Verify that the installation complies with all Federal SQG requirements.</p>
<p><b>HAZARDOUS WASTE GENERATORS - CONDITIONALLY EXEMPT SMALL QUANTITY GENERATORS (SQGs)</b></p> <p>4-3. Installations that are conditionally exempt SQGs must meet specific requirements (CHWMR, Section 22a-449(c)-101(b)).</p>	<p>Determine if the installation is a conditionally exempt SQG based on the Connecticut definition of a SQG and the federal requirements for conditionally exempt SQGs (as defined in 40 CFR 261.5)</p> <p>Verify that the installation meets all the requirements of hazardous waste generators, unless they are specifically exempted from the requirements.</p> <p>Verify that the installation does not offer hazardous waste to a transporter who does not have a USEPA identification number and a current Connecticut transporter permit.</p> <p>Verify that the installation keeps records of any test results, waste analyses, or other determinations for at least 3 yr from the date that the waste was last sent to an onsite or offsite TSDF.</p>

<b>COMPLIANCE CATEGORY:</b> <b>Resource Conservation &amp; Recovery Act, Subtitle C (RCRA-C)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<b>HAZARDOUS WASTE TRANSPORTERS - GENERAL REQUIREMENTS</b>  <b>4-4.</b> Installations that transport hazardous waste must have a permit (CHWMR, Section 22a-449(c)-11).  <b>4-5.</b> Installations that transport hazardous waste must meet specific storage requirements (CHWMR, Section 22a-449(c)-103(b)).  <b>4-6.</b> Installations that transport hazardous waste must meet specific vehicle requirements (CHWMR, Section 22a-449(c)-103(c)).  <b>4-7.</b> Installations that transport hazardous waste must meet specific personnel training requirements (CHWMR, Section 22a-449(c)-103(d)).  <b>4-8.</b> Installations that transport hazardous waste must meet specific requirements if a discharge occurs during transportation (CHWMR, Section 22a-449(c)-103(a)(2)(C)).	<p>Verify that the installation transports hazardous waste in accordance with a valid permit.</p> <p>(NOTE: A transporter permit is not required for a generator of hazardous waste who transports a total of less than 1000 kg of hazardous waste in a calendar month to an offsite facility provided the facility has a permit or is operating under interim status.)</p> <p>Verify that the transporter does not store hazardous waste in or on a vehicle, trailer, or other means of conveyance which is not in transit to the designated facility, for longer than 72 h without the written approval of the Commissioner.</p> <p>Verify that each vehicle displays the number of the permit issued by the Commissioner on the sides and rear of the tank, or waste-carrying portion of the vehicle, in letters and numbers the color of which contrasts with the background and which are at least 10 cm high.</p> <p>Verify that the installation trains all personnel engaged in the handling or transport of hazardous wastes regarding proper emergency response for the types of waste being transported.</p> <p>Verify that personnel training includes the following, at a minimum:</p> <ul style="list-style-type: none"> <li>- required safety equipment and uses</li> <li>- first aid in the event of accidents with the waste</li> <li>- hazards involved with loading and unloading</li> <li>- the manifest system and the terms used</li> <li>- the physical and chemical properties of the waste being transported</li> <li>- emergency procedures for the waste being transported.</li> </ul> <p>Verify that in the event of a discharge of hazardous waste during transportation, the transporter meets all Federal regulations regarding immediate action and gives notice to the National Response Center and then to the Commissioner, using the 24-hour Emergency Spill Response telephone number at (202)566-3338 or, if that number is incorrect, the telephone number listed for Emergency Spill Response with the telephone company.</p>

<b>COMPLIANCE CATEGORY:</b> <b>Resource Conservation &amp; Recovery Act, Subtitle C (RCRA-C)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>HAZARDOUS WASTE TREATMENT, STORAGE, AND DISPOSAL FACILITIES (TSDFs) - ADDITIONAL REQUIREMENTS</b></p> <p><b>4-9.</b> Installations that operate hazardous waste TSDFs must meet specific requirements (CHWMR, Sections 22a-449-104(a)(2)(A), (D), (E), (H), and 104(c); 22a-449(c)-105(a)(2)(A), (D), (E), (H), and 105(e)).</p> <p><b>4-10.</b> The treatment, storage, or disposal of hazardous waste by underground injection is prohibited in Connecticut (CHWMR, Sections 22a-449(c)-104(d) and 22a-449(c)-105(f)).</p>	<p>(NOTE: These requirements apply to both TSDFs and Interim status TSDFs.)</p> <p>Determine if the installation operates a hazardous waste TSDF.</p> <p>Verify that a copy of the manifest is kept with the waste analysis for all waste received, treated, stored, and disposed at the facility.</p> <p>Verify that as soon as waste begins to accumulate in a tank system, the tank is clearly labeled with the words HAZARDOUS WASTE and other words that clearly identify the contents, such as the chemical name.</p> <p>(NOTE: If it is not possible to label the tank or tank system so that the label is conspicuous, then the area adjacent to the tank or tank system must be labeled with the words HAZARDOUS WASTE and other words that clearly identify the contents.)</p> <p>(NOTE: SQGs must not operate uncovered tanks.)</p> <p>Verify that the installation complies with the Federal requirement for filing a biennial report, except that in Connecticut this report must be filed annually.</p> <p>Verify that if a tank system is found not to be tight and is repaired, the tank system is tested again for tightness prior to being covered, enclosed, or placed into use.</p> <p>Verify that any release to the environment from a tank system or secondary containment system must be reported to the Commissioner immediately upon its detection using the Emergency Spill Response telephone number at (203)566-3338 or, if that number is incorrect, Emergency Spill Response telephone number listed with the telephone company.</p> <p>Verify that the installation does not treat, store, or dispose of hazardous waste by underground injection.</p>

<b>COMPLIANCE CATEGORY:</b> <b>Resource Conservation &amp; Recovery Act, Subtitle C (RCRA-C)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<b>STATE REGULATED WASTES</b>  <b>4-11.</b> Installations are required to meet specific management standards for state regulated wastes (CHWMR, Sections 22a-432, 22a-448, and 22a-454).	<p>Verify that hazardous wastes are tested for suspected hazardous constituents prior to treatment and disposal.</p> <p>Verify that wastes that are determined not to be hazardous wastes are evaluated to determine if they are state regulated wastes based on the descriptions given in Appendix 4-1.</p> <p>Verify that installations that store, treat, dispose, or transport state regulated wastes have a Connecticut regulated waste facility permit.</p> <p>Verify that the Oil and Chemical Spills Section of the Department of Environmental Protection (DEP) at (203) 566-4633 is contacted in the event of a spill of any regulated waste.</p> <p>(NOTE: Regulated wastes may not be disposed in a landfill and must be handled by a facility permitted by the Commissioner for the transportation, storage, treatment, or disposal of Connecticut regulated wastes.)</p>



## Appendix 4-1

### Connecticut Regulated Wastes

(NOTE: These are wastes which are neither characteristically nor listed hazardous wastes as per 40 CFR 261, but a facility permit is required by Section 22a-454 of the Connecticut General Statutes for a person engaged in the business of storage, treating, disposing, or transporting\* them.)

Waste #	Waste Name	Description
CR01	Waste PCB	Any waste material containing or contaminated by PCBs in concentrations at or above 50 ppm. These include, but are not limited to, PCB oils, items, and equipment.
CR02	Waste oil	Oil or petroleum that is no longer suitable for the services for which it was manufactured due to the presence of impurities or a loss of original properties; and it is not miscible in water. These include, but are not limited to, crude oil, fuel oil, lubricating oil, kerosene, diesel fuel, motor oil, nonhalogenated oil, and oils that are recovered from oil separators, oil spills, or tank bottoms.
CR03	Wastewater soluble oil	Oil or petroleum that is no longer suitable for the services for which it was manufactured due to the presence of impurities or a loss of original properties; and it is miscible in water. These include, but are not limited to, cutting oil emulsions or coolants.
CR04	Waste chemical liquids	Any wastes that are liquid, free flowing, and/or contain free draining liquids and are toxic, hazardous to handle and/or may cause contamination of groundwater and/or surface water if improperly managed. These wastes may include, but are not limited to, paint wastes, grinding wastes, and waste sludges.
CR05*	Waste chemical solid	Any chemical solid or semisolid from a commercial, industrial, agricultural, or community activity.

\* The Connecticut General Statutes do not require the transporter to be licensed to transport CR05 (waste chemical solid.)





<b>INSTALLATION:</b>	<b>COMPLIANCE CATEGORY:</b> Resource Conservation & Recovery Act Subtitle C (RCRA-C) Connecticut Supplement	<b>DATE:</b>	<b>REVIEWER(S):</b>
<b>STATUS</b> NA   C   RMA	<b>REVIEWER COMMENTS:</b>		

**SECTION 5**

**RESOURCE CONSERVATION AND RECOVERY ACT,**

**SUBTITLE D (RCRA-D)**

**Connecticut Supplement**

**SECTION 5**  
**RESOURCE CONSERVATION AND**  
**RECOVERY ACT, SUBTITLE D (RCRA-D)**  
**Connecticut Supplement**

**Definitions**

These definitions were obtained from the Regulations of Connecticut State Agencies, Department of Environmental Protection, Solid Waste Management Regulations, Sect. 22-209-2.

- *Air Pollution Control Residue* - unburned particles and air pollution control reactants that become entrained in the stack gases of an incinerator and are removed and collected by air pollution control equipment.
- *Alter* - when referring to a solid waste facility with no permit, to change the existing configuration or method of operation of the facility in any manner, including, but not limited to, adding to the volume of solid waste deposited at the facility. When referring to a solid waste facility with a permit, to change the approved configuration or method of operation of the facility in any manner, including, but not limited to, adding to the approved volume of solid waste deposited at the facility.
- *Antineoplastic Agent* - any substance approved for human use that is produced or used to stop or reverse the growth of malignant cells.
- *Asbestos* - actinolite, amosite, antophyllite, chrysotile, crocidolite, tremolite, or any material that contains these materials, all or part of any being in a friable state.
- *Base Flood* - a flood that has a 1 percent or greater chance of recurring in any year, or a flood of a magnitude equaled or exceeded once in 100 yr on the average over a significantly long period. If the Commissioner deems it necessary for a particular location, the base flood will represent a less common occurrence as specified by the Commissioner.
- *Bird Hazard* - an increase in the likelihood of bird/aircraft collisions that may cause damage to the aircraft or injury to its occupants.
- *Biological* - a preparation made from a living organism or its products (including vaccines and cultures) intended for use in diagnosing, immunizing, treating humans or animals, or research pertaining to humans or animals.
- *Biomedical Waste* - untreated solid waste, any disposable container of such untreated solid waste, and any reusable container of such untreated solid waste that has not been decontaminated, generated during the administration of medical care or the performance of medical research involving humans or animals, including infectious waste, pathological waste and chemotherapy waste, but excluding the following:
  1. any solid waste that is hazardous waste or a regulated radioactive material
  2. untreated solid waste generated during the administration of medical care in a single or multiple family residence by a person living in the residence (multiple family residence does not include any facility specified in the definition of biomedical waste generator)

3. discarded materials used for personal hygiene, such as diapers, facial tissues, and sanitary napkins, unless such materials are isolation waste
  4. syringes, hypodermic needles, and other medical equipment used by farmers for treating livestock in the course of farming, provided that such equipment is not excluded when used by a veterinarian or at the direction of a veterinarian
  5. samples of biomedical waste collected and transported by Department personnel for enforcement purposes.
- *Biomedical Waste Generator or Generator* - any person owning or operating a facility that produces biomedical waste in any quantity, including but not limited, to the following:
    1. general hospitals
    2. skilled nursing facilities
    3. convalescent hospitals
    4. intermediate care facilities
    5. in-patient care facilities for the developmentally disabled
    6. chronic dialysis clinics
    7. free clinics
    8. health maintenance organizations
    9. surgical clinics
    10. acute psychiatric hospitals
    11. laboratories
    12. medical buildings
    13. physicians' offices
    14. veterinarians
    15. dental offices
    16. funeral homes.
  - *Biomedical Waste Incinerator Residue* - bottom ash, air pollution control residue, and other residuals of the combustion process of an incinerator used for the combustion of biomedical waste.
  - *Biomedical Waste Transporter or Transporter* - a person engaged in the transportation of biomedical waste by air, rail, highway, or water.
  - *Biomedical Waste Treatment Facility* - a solid waste facility capable of storing, treating, or disposing of any amount of biomedical waste, excluding any facility where the only biomedical waste stored, treated or disposed of is biomedical waste generated at the site where that facility is located.
  - *Blood Product* - any substance derived from human blood, including but not limited to, plasma, platelets, red or white blood cells, and interferon.
  - *Body Fluid* - any substance that emanates or derives from the human body, including but not limited to, blood, semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, peritoneal fluid, and pericardial fluid, but excluding feces, urine, nasal secretions, sputum, sweat, tears, vomitus, saliva, and breast milk, unless any such excluded substance contains visible blood or is isolation waste.
  - *Bottom Ash* - unburned or unburnable solid residue from incineration processes that does not become airborne.
  - *Bulky Waste* - land clearing debris and waste resulting directly from demolition activities other than clean fill.

- *Cardboard* - corrugated boxes and similar corrugated and kraft paper materials that have a minimum of contamination by food or other material.
- *Cell Construction Method* - the spreading, compacting, and daily covering of solid wastes through the use of the area, ramp, or trench methods of landfilling.
- *Central Collection Point* - a location, whether located on or off the generator's site, at which the generator consolidates biomedical waste accumulated from original generation points before transporting it for treatment, storage, or disposal, provided that the central collection point is operated by that generator.
- *Certified Operator* - the solid waste facility operator or an employee of the operator who is present on site and oversees or carries out the daily operation of the facility, and whose qualifications are approved in accordance with operator certification requirements.
- *CFR* - Code of Federal Regulations.
- *Chemotherapy Waste* - waste that has come in contact with an antineoplastic agent during the preparation, handling, or administration of the agent. A container that is or has been used to contain the agent will be deemed chemotherapy waste even if the container is empty.
- *Clean Fill* - natural soil, rock, brick, ceramics, concrete, and asphalt paving fragments that are virtually inert and pose neither a pollution threat to groundwater or surface waters nor a fire hazard.
- *Commissioner* - the commissioner of environmental protection or his authorized agent.
- *Container* - any receptacle that is used to contain material. *Primary container* means the initial container in which biomedical waste is placed when multiple containers for packaging of biomedical wastes are required. *Secondary container* is a container for the primary container.
- *Cover Material* - soil, or other suitable material as approved by the Commissioner, that is used to cover compacted solid waste in a solid or special waste disposal area. Any soils used will be classified as: GM, silty gravels, poorly graded gravel-sand-silt mixtures; GC, clayey gravels, poorly graded gravel-sand-clay mixtures; SM, silty sands, poorly graded sand-silt mixtures; SC, clayey sands, poorly graded sand-clay mixtures; ML, inorganic silts and very fine sands, rock flour, silty or clayey fine sands with slight plasticity in accordance with the unified soil classification system.
- *Decontaminate* - to substantially reduce or eliminate, by disinfection or other means, any biological hazard that is or may be associated with medical waste.
- *Department* - the department of environmental protection.
- *Dewater* - to subject material to a process that removes water.
- *Dioxin Sampling Well* - a stainless steel groundwater monitoring well installed within the area of predicted leachate plume from any portion of a solid waste facility where residue is disposed.
- *Endangered or Threatened Species* - any species listed as such in Section 4 of the *Endangered Species Act*.
- *Etiologic Agent* - an organism defined to be an etiologic agent in 49 CFR 173.386.

- *Facility Plan* - the engineering studies and proposals to build, establish, alter, operate, monitor, and close a solid waste facility, as required under construction permit requirements.
- *Floodplain* - the lowland and relatively flat areas adjoining inland and coastal waters, including flood-prone areas of offshore islands, that are inundated by the base flood.
- *Friable* - readily crumbled, pulverized, or reduced to powder, when dry, by hand pressure.
- *Glass Food Container* - a glass bottle or jar of any size or shape used to package food products suitable for human or animal consumption.
- *Groundwater* - water present in the zone of saturation.
- *Groundwater Monitoring Well* - a dug, driven, or drilled well used to determine groundwater elevation, direction of groundwater flow, or the quality of groundwater.
- *Hazardous Waste* - any waste material that may pose a present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed, including hazardous waste identified in accordance with Section 3001 of the *Resource Conservation and Recovery Act (RCRA)* of 1976 (42 USC 6901 et seq.), as amended.
- *Incinerator* - any device, apparatus, equipment, or structure as defined in the Connecticut air regulations.
- *Infectious Agent* - any organism, such as a virus or bacterium, that is capable of being communicated by invasion and multiplication in body tissue and capable of causing disease or adverse health impacts in humans.
- *Infectious Waste* - waste that is capable of causing an infectious disease, is one of the wastes in the following list, or is waste identified as infectious by a licensed health care provider. Waste is deemed capable of causing an infectious disease if there is reason to think it has been contaminated by an organism known or suspected to be pathogenic to humans, and if such organism may be present in sufficient quantities and with sufficient virulence to transmit disease. The following are infectious waste.
  1. any discarded culture or stock of infectious agents and associated biologicals, including human and animal cell cultures from clinical, hospital, public health, research, and industrial laboratories
  2. any waste from the production of biologicals or any discarded etiologic agent
  3. any discarded live or attenuated vaccine or serum
  4. any discarded culture dish or device used to transfer, inoculate, or mix cell cultures
  5. any body fluid, waste human blood, or waste blood product, or any container of any of these wastes
  6. any disposable item saturated or dripping with a body fluid or was saturated or dripping with a body fluid and has since caked with dried body fluid
  7. any discarded, used sharp and any residual substance inside
  8. any discarded, unused hypodermic needle, scalpel blade, suture needle, or syringe
  9. any discarded animal carcass, animal body part, or animal bedding, when the carcass, part, or bedding is known to be contaminated with or to have been exposed to an infectious agent
  10. isolation waste
  11. any material collected during or resulting from the cleanup of a spill of infectious or chemotherapy waste
  12. any waste that is neither a hazardous waste nor a radioactive material and is mixed with infectious waste.

- *Intermediate Processing Center* - a facility that can recycle an item or items and market or deliver for reuse the resulting material product or products. Such facilities may be owned by public or private entities or combinations of public or private entities and may offer service on a state, regional, municipal, or submunicipal level.
- *Interment* - burial in a cemetery or burial place.
- *Isolation Waste* - discarded material contaminated with body fluids from humans who are isolated to protect others from a highly communicable disease and animals isolated because they are known to be infected with an infectious agent capable of causing a highly communicable disease. A highly communicable disease is one listed in Biosafety Level 4 of the Centers for Disease Control/National Institutes of Health Guidelines entitled *Biosafety in Microbiological and Biomedical Laboratories* and dated May 1988.
- *Leachate* - the liquid that results from groundwater or surface water that has been in contact with solid waste and has extracted material, either dissolved or suspended, from the solid waste.
- *Leaves* - the foliage of trees.
- *Lift* - a horizontal layer of cells within a solid waste disposal area where the cell construction method is used.
- *Local Processing System* - a facility or technique authorized by a municipality and acceptable to the Commissioner that can recycle an item or items and market or deliver for reuse the resulting material product or products.
- *Lower Explosive Limit* - the lowest percent by volume of gas that will propagate a flame in air at 25 °C and atmospheric pressure.
- *Market* - to sell or deliver a recyclable item to a consumer who will reuse it or dispose of it for reuse in a material product.
- *Maximum High Water Table* - the highest elevation reached by the upper level of the groundwater as determined by an engineering evaluation conducted in accordance with test methods approved by the Commissioner.
- *Metal Food Container* - an aluminum, bi-metal, steel, tin-plated steel, or other metallic can, plate, or tray of any size or shape used to package food products suitable for human or animal consumption.
- *Monocell* - a variation of the cell construction method. Only a single type of solid waste is disposed of in any individual cell.
- *Municipal Solid Waste* - solid waste from residential, commercial, industrial, and institutional sources, excluding solid waste consisting of significant quantities of hazardous waste, landclearing debris, biomedical waste, sewage sludge, and scrap metal.
- *Newspaper* - used or discarded newsprint that has a minimum of contamination by food or other material.
- *Office Paper* - used or discarded high-grade white paper and Manila paper including, but not limited to, paper used for file folders, tab cards, writing, typing, printing, computer printing, and photocopying, that is suitable for recycling and has a minimum of contamination. Office paper generated by households is excluded.



- *Open Dump* - a site at which solid waste is disposed of in a manner that does not comply with Subtitle D of the RCRA, (42 USC 6901 et seq.), as amended, and regulations promulgated thereunder.
- *Operator* - a person who is ultimately responsible for maintaining the solid waste facility in conformance with applicable statutes and regulations and the facility permits.
- *Original Generation Point* - the location on a site where biomedical waste is generated.
- *Pan Lysimeter* - a leachate collection device for sampling leachate from monocells within a solid waste disposal area.
- *Pathological Waste* - any human tissue, organ, or body part removed during surgery, autopsy, or other medical procedure. Pathological waste does not include formaldehyde or other preservation agents, or a human corpse or part of a corpse regulated under state laws for disposal of human bodies, for anatomical donations, for crematories, and for cemeteries.
- *Person* - any individual, firm, partnership, association, syndicate, company, trust, corporation, municipality, agency, political or administrative subdivision of the state, or other legal entity of any kind.
- *Public Airport* - an airport open to the public without prior permission and without restrictions within the physical capacities of available facilities.
- *Publicly Owned Treatment Works (POTW)* - a system used for the collection, treatment, and/or disposal of sewage from more than one lot that discharges to the waters of the state and is owned by a municipality or the state.
- *Recycle* - to separate or divert an item or items from the solid waste stream for the purposes of processing it or causing it to be processed into a material product, including the production of compost, in order to provide for disposition of the item or items in a manner, other than incineration or landfilling, that will best protect the environment. Nothing in this definition precludes the use of waste oil as fuel in an oil burner.
- *Regional Processing Center* - an intermediate processing center authorized by a group of municipalities or designated by the Commissioner that can recycle an item or items and market the resulting material product or products.
- *Regional Solid Waste Disposal Area* - a solid waste disposal area used for the disposal of solid waste generated in more than one municipality.
- *Residue* - bottom ash, air pollution control residue, and other residues from the combustion process at resources recovery facilities, municipal solid waste incinerators, and biomedical waste incinerators.
- *Resources Recovery Facility* - a volume reduction plant using processes aimed at reclaiming the material or energy values from solid wastes.
- *Scrap Metal* - used or discarded items that consist predominantly of ferrous metals, aluminum, brass, copper, lead, chromium, tin, nickel, or alloys thereof, including but not limited to, white goods and metal food containers.

- *Sharp* - an item capable of causing a puncture or cut, including but not limited to a hypodermic needle, scalpel blade, and broken glassware, provided that the broken glassware is not deemed a sharp unless it is known to be contaminated with an infectious agent and provided that a syringe, regardless of whether or not a hypodermic needle is attached, is deemed a sharp.
- *Shipping Paper* - a shipping order, bill of lading, manifest, or other shipping document, as defined in 49 CFR Section 171.8.
- *Small Quantity Generator (SQG)* - a biomedical waste generator that generates less than 50 lb of biomedical waste in any calendar month or who transports, or delivers for transport, in any single shipment less than 50 lb of biomedical waste.
- *Solid Waste Boundary* - the outermost perimeter of the solid or special waste (projected in the horizontal plane) as it would exist at completion of the permitted disposal activity at a solid waste or special waste disposal area.
- *Special Waste Disposal Area* - a solid waste disposal area where special wastes are disposed of.
- *Special Wastes* - the following wastes, as long as they are not hazardous waste or radioactive material:
  1. water treatment, sewage treatment, or industrial sludges
  2. liquid, solids, and contained gases
  3. fly ash and casting sands or slag
  4. contaminated dredge spoils
  5. scrap tires
  6. bulky waste
  7. asbestos
  8. residue
  9. biomedical waste.
- *Spill* - any unplanned release, leaking, pumping, pouring, emitting, or depositing of biomedical waste or any planned release, leaking, pumping, pouring, emitting, or depositing of biomedical waste in violation of requirements.
- *Storage* - the temporary holding of biomedical waste, other than temporary holding conducted in accordance with the requirements for biomedical waste transporters who store biomedical waste in the same vehicle used to pick up and transport the waste from generators, at any location before treating or disposing of it or transporting it for treatment, disposal or further storage.
- *Stormwater* - precipitation runoff.
- *Tracking Form* - a form used by the generator of biomedical waste to track the waste's movement from the site of generation to a solid waste facility or facilities for purposes of storage, treatment, or disposal.
- *Transfer* - to move, or the movement of, biomedical waste from one location on the site where the waste was generated to another location on the site.
- *Transfer Station* - a volume reduction plant that is a central collection point for the solid waste generated within a municipality or group of municipalities where solid wastes received are transferred to a vehicle for removal to another solid waste facility.
- *Transport* - to move biomedical waste by air, rail, highway, or water from the site where the waste was generated to any other site.

- *Transportation* - the act of transporting or the state of being transported.
- *Transport Vehicle or Vehicle* - any conveyance used for the transportation of biomedical waste. Each cargo-carrying compartment of a vehicle, such as a truck trailer or railroad freight car, is a separate vehicle.
- *Treat* - to decontaminate biomedical waste and to physically alter it so as to render it unrecognizable as biomedical waste.
- *Treatment* - the act of treating or the state of being treated.
- *Universal Biohazard Symbol* - the symbol shown in 29 CFR Section 1910.145(f)(8)(ii).
- *Vector* - an insect, rodent, or other animal (not human) that can transmit infectious diseases from one person or animal to another person or animal.
- *Violent Mechanical Stress* - tensile or compressive forces acting upon packaging material so as to cause the material to tear, rip, burst, or otherwise fail.
- *Volume Reduction Plant* - any location or structure, located on land or water, where more than 2000 lb/h of solid waste generated elsewhere may be reduced in volume, including, but not limited to, resources recovery facilities and other incinerators, recycling facilities, pulverizers, compactors, shredders, balers, and composting facilities.
- *Washout* - the carrying away of solid waste by waters of the base flood.
- *Waste Collection Area* - a designated collection area with one or more containers that may be used to hold waste unloaded from noncommercial vehicles.
- *Waste Oil* - crankcase oil that has been used in internal combustion engines.
- *Water Quality Standards* - the water quality standards and water quality classifications map published by the Connecticut Department of Environmental Protection, February 1987.
- *Water Table* - that surface of a body of unconfined groundwater at which the pressure is equal to that of the atmosphere.
- *Working Face* - the portion of a solid waste or special waste disposal area at which the waste is deposited, spread, and compacted prior to the placement of cover material.
- *Zone of Influence* - the area in which, assuming the absence of any means at a solid waste facility to collect or treat leachate, groundwater may be altered in quality due to discharge of leachate from any portion of such a facility.

**RESOURCE CONSERVATION AND RECOVERY ACT, SUBTITLE D (RCRA-D)**  
**GUIDANCE FOR CONNECTICUT CHECKLIST USERS**

<b>Applicability</b>	<b>Refer to Checklist Items:</b>
Open Dumps	5-1
Permits	5-2
Operator Certification	5-3
Solid Waste Facility Operating Requirements	5-4 through 5-31
Special Waste Disposal	5-32 through 5-39
Solid Waste Transfer Stations	5-40 through 5-55
Resources Recovery Facilities, Other Volume Reduction Plants, and Biomedical Waste Treatment Facilities	5-56 through 5-68
Biomedical Waste	5-69 through 5-76
Biomedical Waste Transportation	5-77 through 5-89
Biomedical Waste Incineration	5-90 through 5-92
Biomedical Waste Sterilization	5-93 through 5-98
Biomedical Waste - Small Quantity Generators (SQGs)	5-99 through 5-108
Solid Waste Facility Closings	5-109 through 5-112
Residue Disposal	5-113 through 5-120
Liner Systems For Solid Waste Disposal Areas Accepting Residue	5-121 through 5-125
Recycling	5-126



<b>COMPLIANCE CATEGORY:</b> <b>Resource Conservation &amp; Recovery Act, Subtitle D (RCRA-D)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>OPEN DUMPS</b></p> <p><b>5-1.</b> Installations must not operate open dumps (Regulations of Connecticut State Agencies, Section 22a-209-2).</p>	<p>Verify that the installation does not have an open dump.</p> <p>Verify that solid waste disposal is done only through use of solid waste disposal areas, volume reduction plants, biomedical waste treatment facilities, and resources recovery systems established and operated in accordance with these solid waste requirements and solid waste facility permit conditions.</p>
<p><b>PERMITS</b></p> <p><b>5-2.</b> Installations must meet permit requirements for solid waste facilities (Regulations of Connecticut State Agencies, Section 22a-209-3; Regulations of Connecticut State Agencies, Section 22a-209-4(a), (c), (c)(1), (e) and (j); and Regulations of Connecticut State Agencies, Section 22a-209-11(a) and (g)).</p>	<p>Verify that the installation building, establishing, or altering a solid waste facility obtains a permit.</p> <p>Verify that any installation operating or causing the operation of a solid waste facility obtains a permit.</p> <p>(NOTE: All operating facilities with a valid permit to construct will be allowed to operate until the permit to operate is issued.)</p> <p>(NOTE: Areas which are solely for the disposal of clean fill are exempted from solid waste management requirements, including permit requirements.)</p> <p>Verify that all terms and conditions of the permit are met immediately.</p> <p>Verify that the permittee submits a complete set of as-built drawings within 90 days of completion of construction of a solid waste facility other than a solid or special waste disposal area.</p> <p>(NOTE: Variances may be sought for facility design, operating requirements, or temporary operations. Unless and until a variance is granted, the solid waste facility must comply with applicable statutes, regulations, and permit conditions.)</p>
<p><b>OPERATOR CERTIFICATION</b></p> <p><b>5-3.</b> Solid waste facilities must meet requirements for operator certification (Regulations of Connecticut State Agencies, Section 22a-209-6(a) and (c)).</p>	<p>Verify that a certified operator is present at the solid waste facility at all times during operating hours.</p> <p>Verify that the Department is notified of any of the following occurrences at a solid waste facility:</p> <ul style="list-style-type: none"> <li>- no certified operator</li> <li>- the facility's sole certified operator's certification lapses or is revoked</li> <li>- certified operator leaves.</li> </ul>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>5-3. (continued)</b></p> <p><b>SOLID WASTE FACILITY OPERATING REQUIREMENTS</b></p> <p><b>5-4.</b> Installations with solid waste facilities must meet requirements for ground and surface water protection (Regulations of Connecticut State Agencies, Section 22a-209-7(c)(1) and (2)(A) and (B)).</p> <p><b>5-5.</b> Solid waste facilities must meet grading requirements (Regulations of Connecticut State Agencies, Section 22a-209-7(c)(3)).</p>	<p>Verify that a solid waste facility without a certified operator with valid certification applies to the Department to have an appropriate person certified.</p> <p>(NOTE: A solid waste facility may operate without a certified operator if the installation notifies the Department of the lack of an operator with valid certification and applies to the Department to have an appropriate person certified.)</p> <p>Verify that a minimum of 60 in. is maintained between the base of deposited solid wastes and the maximum high water table or bedrock.</p> <p>(NOTE: A smaller gap than 60 in. may be allowed by the Commissioner.)</p> <p>Verify that a new or existing solid waste disposal area does not impair the quality of surface or groundwater beyond the solid waste boundary so that the water quality is degraded beyond any of the following:</p> <ul style="list-style-type: none"> <li>- the water quality classification established by the Department</li> <li>- the Connecticut water quality standards and criteria</li> <li>- the standards for quality of public drinking water established by the State Department of Health Services.</li> </ul> <p>Verify that, in those cases where the existing water quality fails to meet the established standards, the disposal area does not further degrade water quality.</p> <p>(NOTE: The Commissioner may designate an alternate boundary, beyond the solid waste boundary, that will serve as the limit for any degradation. The solid waste facility then must not impair the quality of surface or groundwater beyond this alternate boundary.)</p> <p>Verify that the solid waste disposal area is graded and provided with any necessary drainage facilities so all the following occur:</p> <ul style="list-style-type: none"> <li>- infiltration of rain or surface runoff is minimized</li> <li>- erosion or washing out of areas is prevented</li> <li>- the collection of standing water is prevented.</li> </ul> <p>Verify that the top surface area is graded at all times to a slope of at least 4 percent.</p> <p>Verify that the side slopes do not exceed a grade of 1 vertical on 3 horizontal.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<b>5-5. (continued)</b>	(NOTE: The Commissioner may approve different slopes or grades for the top surface area and side slopes.)
<b>5-6.</b> Solid waste facilities in floodplains must meet requirements (Regulations of Connecticut State Agencies, Section 22a-209-7(c)(4)).	<p>Verify that solid waste facilities in floodplains do not do any of the following in a manner hazardous to persons, property, wildlife, land or water resources:</p> <ul style="list-style-type: none"> <li>- restrict the flow of the base flood</li> <li>- reduce the temporary water storage capacity of the floodplain</li> <li>- result in washout of solid waste.</li> </ul>
<b>5-7.</b> Solid waste facilities must meet requirements for avoiding contact between surface water and solid waste (Regulations of Connecticut State Agencies, Section 22a-209-7(c)(5)).	<p>Verify that solid waste does not come in contact with surface waters.</p> <p>Verify that disposal operations are conducted in a manner that minimizes the impact on surface waters.</p>
<b>5-8.</b> Solid waste facilities must meet erosion control requirements (Regulations of Connecticut State Agencies, Section 22a-209-7(c)(6)).	<p>Verify that one of the following are used when needed to avoid stream siltation or flooding problems due to excess runoff:</p> <ul style="list-style-type: none"> <li>- siltation or retention basins</li> <li>- other methods approved by the Commissioner for retarding runoff.</li> </ul>
<b>5-9.</b> Solid waste facilities must meet requirements for distances between wells and deposited solid waste (Regulations of Connecticut State Agencies, Section 22a-209-7(c)(7)).	<p>Verify that a minimum distance of 1000 ft exists between deposited solid wastes and wells used for water supply purposes.</p> <p>(NOTE: The Commissioner may allow lesser separation of wells and deposited solid waste.)</p>
<b>5-10.</b> Solid waste facilities must meet groundwater monitoring requirements (Regulations of Connecticut State Agencies, Section 22a-209-7(c)(8)(A) and (C)).	<p>Verify that the following have occurred before the solid waste facility disposal area starts operating:</p> <ul style="list-style-type: none"> <li>- groundwater monitoring system is installed</li> <li>- a sufficient number of surface and groundwater samples and analyses are done to determine baseline water quality information.</li> </ul> <p>Verify that monitoring is performed according to the schedule in the facility plan and/or the permit to construct.</p> <p>Verify that ground or surface water samples are analyzed by a state-approved laboratory using Commissioner-approved methods.</p>



<b>COMPLIANCE CATEGORY:</b> <b>Resource Conservation &amp; Recovery Act, Subtitle D (RCRA-D)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<b>5-10. (continued)</b>	Verify that copies of analyses are forwarded to the Department's Solid Waste Management Unit.
<b>5-11.</b> Installations with inactive or active solid waste disposal areas must meet requirements for investigating disposal areas suspected of being actual or potential threats to water quality (Regulations of Connecticut State Agencies, Section 22a-209-7(c)(8)(B)).	Verify that, when the Commissioner thinks a disposal area could or is threatening surface or groundwater quality, all the following actions are taken: <ul style="list-style-type: none"> <li>- investigation of the extent and degree of surface and/or groundwater contamination resulting from the disposal of solid wastes</li> <li>- construction and installation plans for a surface and/or groundwater monitoring system are submitted for Commissioner approval</li> <li>- the monitoring system is installed in conformance with the plans, and the plans become part of the facility plan</li> <li>- monitoring is done in accordance to a Commissioner-approved schedule.</li> </ul>
<b>5-12.</b> Installations with solid waste disposal areas must meet access requirements (Regulations of Connecticut State Agencies, Section 22a-209-7(d)).	Verify that all-weather roads connect public roads or highways and the solid waste disposal area.  Verify that all-weather roads are maintained so they are passable by all vehicles using the area.  Verify that access to the solid waste disposal area is controlled to prevent unauthorized use.  (NOTE: Control can include use of signs, gates, and fences.)  Verify that a sign is posted at the facility entrance that states the: <ul style="list-style-type: none"> <li>- name of the permittee</li> <li>- hours of use of the area</li> <li>- authorized users</li> <li>- required safety precautions.</li> </ul>
<b>5-13.</b> Installations with active and inactive solid waste disposal areas must provide fire protection (Regulations of Connecticut State Agencies, Section 22a-209-7(e)).	Verify that an installation with a disposal area at which smoldering, smoking, or burning is occurring does all of the following: <ul style="list-style-type: none"> <li>- immediately notifies the Department Solid Waste Management Unit</li> <li>- if reasonably necessary, obtains firefighting assistance from area fire departments</li> <li>- ensures that firefighting activities continue until all smoldering, smoking, and burning has ceased, as proven by scientific methods acceptable to the Department</li> <li>- ceases all disposal activities in the immediate vicinity of any smoldering, smoking, or burning</li> <li>- takes precautions to prevent disposal activities from interfering with firefighting activities</li> </ul>

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REGULATORY REQUIREMENTS:	REVIEWER CHECKS:
<b>5-13. (continued)</b>	<ul style="list-style-type: none"> <li>- closes the facility until all smoldering, smoking, and burning has ceased, if required by the Commissioner or local fire officials</li> <li>- recovers and repairs any disruption of the grade or covered compacted surfaces after the firefighting has ceased.</li> </ul>
<b>5-14.</b> Installations must meet recordkeeping requirements for solid waste disposed of at a solid waste disposal area (Regulations of Connecticut State Agencies, Section 22a-209-7(f)).	<p>Verify that daily records are maintained in a manner acceptable to the Commissioner.</p> <p>Verify that the daily records include:</p> <ul style="list-style-type: none"> <li>- measured weights or estimated tonnage of wastes received from each municipality using the site</li> <li>- total weights from other sources</li> <li>- the tonnage of materials removed for resources recovery and the markets used.</li> </ul> <p>Verify that the daily records are available for inspection by Department representatives at any reasonable time.</p> <p>Verify that monthly summaries of the daily records are submitted to the Department no later than 10 days after the last day of each quarter of the calendar year.</p> <p>Verify that updated topographic mapping of fill areas performed in compliance with permits is submitted annually to the Commissioner for regional solid waste disposal areas.</p> <p>(NOTE: The Commissioner may require updated topographic mapping of fill areas from nonregional solid waste disposal areas.)</p>
<b>5-15.</b> Installations with active solid waste disposal areas must meet requirements for the working face of the dump (Regulations of Connecticut State Agencies, Section 22a-209-7(h)(1) and (2)).	<p>Verify that the work face is kept as narrow as is consistent with the proper operation of trucks and equipment so the area of waste exposed each operating day is minimal.</p> <p>Verify that the working face does not exceed 150 ft in width when measured across the operating surface of the solid waste disposal area.</p> <p>Verify that no more than one working face is in use at one time.</p> <p>(NOTE: The limit of one working face at a time does not apply to facilities at which separate areas are designated on the approved facility plan for specific wastes.)</p> <p>Verify that the unloading of solid wastes is restricted and controlled to assure the proper handling of solid wastes.</p> <p>Verify that no scavenging at the working face occurs.</p>

<b>COMPLIANCE CATEGORY:</b> <b>Resource Conservation &amp; Recovery Act, Subtitle D (RCRA-D)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>5-16.</b> Solid waste disposal areas must meet requirements for cell construction (Regulations of Connecticut State Agencies, Section 22a-209-7(h)(3)).</p>	<p>Verify that the cell construction method of sanitary landfilling is used.</p> <p>Verify that solid waste is spread and compacted in layers not more than 3 ft thick.</p> <p>Verify that each individual cell does not exceed 10 ft in height.</p> <p>(NOTE: The Commissioner may allow cells exceeding 10 ft in height.)</p>
<p><b>5-17.</b> Solid waste facilities must meet requirements for waste collection areas (Regulations of Connecticut State Agencies, Section 22a-209-7(i)).</p>	<p>Verify that disposal area personnel oversee the disposal of waste at waste collection areas.</p> <p>Verify that no scavenging occurs at waste collection areas.</p> <p>Verify that waste collection areas are located a safe distance from all the following:</p> <ul style="list-style-type: none"> <li>- the working face</li> <li>- movement of disposal area equipment</li> <li>- movement of commercial collection and hauling vehicles.</li> </ul> <p>Verify that no waste remains in the collection area for more than 48 h and all waste is removed from the collection area and deposited in the working face of the disposal area.</p> <p>(NOTE: Portions of the solid waste disposal area used solely for collecting and storing recyclable materials are not subject to waste collection area requirements.)</p>
<p><b>5-18.</b> Equipment used in solid waste disposal areas must meet requirements (Regulations of Connecticut State Agencies, Section 22a-209-7(j)).</p>	<p>Verify that equipment used for spreading, compacting, and covering is of sufficient size and number to achieve maximum compaction and efficient operation.</p> <p>Verify that provisions are made for the routine operational maintenance of equipment at the solid waste disposal area or elsewhere, and for prompt repair or replacement of equipment.</p> <p>Verify that a contingency plan exists for obtaining alternative equipment or another alternative method of disposal if an equipment breakdown is reasonably expected to last more than 24 h.</p> <p>Verify that the Department is notified of any breakdown reasonably expected to last more than 24 h.</p>
<p><b>5-19.</b> Solid waste disposal areas must meet requirements for blowing litter (Regulations of Connecticut State Agencies, Section 22a-209-7(k)).</p>	<p>Verify that blowing litter is controlled by any of the following means:</p> <ul style="list-style-type: none"> <li>- fencing near the working area</li> <li>- earth banks</li> <li>- other natural barriers acceptable to the Commissioner.</li> </ul>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<b>5-19. (continued)</b>	<p>Verify that solid wastes are unloaded so as to minimize scattering.</p> <p>Verify that the entire solid waste disposal area is reasonably clear of litter at the end of each working day.</p>
<b>5-20.</b> Solid waste disposal areas must meet requirements for cover operations (Regulations of Connecticut State Agencies, Section 22a-209-7(l)).	<p>Verify that a standby supply of cover material, equal to 25 percent of the volume of the disposal area consumed in 10 days at normal disposal rates, is stored within the solid waste disposal area boundaries.</p> <p>Verify that the standby supply of cover material is protected from freezing.</p> <p>Verify that cover material is applied and compacted to a minimum thickness of 6 in. on all exposed wastes at the end of each working day.</p> <p>Verify that, if more than 9 mo is expected to elapse before another lift is added, a layer of intermediate cover material compacted to a minimum uniform depth of 1 ft is placed on the solid waste disposal areas, and vegetative cover is planted in the next planting season and maintained.</p> <p>(NOTE: The final lift is not required to meet intermediate cover requirements.)</p> <p>Verify that a uniform layer of final cover material compacted to a minimum of 2 ft is placed over the entire surface of each portion of the final lift not later than 1 week following the final placement of solid waste in that portion of the area.</p> <p>(NOTE: The facility permit to construct may specify alternate final cover requirements.)</p> <p>Verify that, upon application of final cover, the solid waste disposal area is regraded to prevent erosion and ponding, and vegetative cover is planted in the next planting season and maintained.</p>
<b>5-21.</b> Solid waste disposal areas must meet vector control requirements (Regulations of Connecticut State Agencies, Section 22a-209-7(m)).	<p>Verify that conditions are unfavorable for the harboring, feeding and breeding of vectors.</p> <p>Verify that any additional means for controlling and exterminating vectors are instituted, when required by the Commissioner.</p>
<b>5-22.</b> Solid waste disposal areas must meet requirements for decomposition gas control (Regulations of Connecticut State Agencies, Section 22a-209-7(n)).	<p>Verify that decomposition gases are controlled in a way that avoids posing hazards to persons or property and minimizes adverse environmental effects.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<b>5-22. (continued)</b>	<p>Verify that the concentration of methane gases generated by the solid waste disposal area do not exceed the following amounts for the following areas:</p> <ul style="list-style-type: none"> <li>- 25 percent of the lower explosive limit for methane in onsite or offsite structures such as buildings, sheds, and utility or drainage lines but not gas control or recovery system components</li> <li>- the lower explosive limit for methane in the ground at the solid waste disposal area property boundary.</li> </ul> <p>Verify that no new solid waste disposal area begins operations without first installing any gas venting and monitoring system indicated in the approved facility plan.</p> <p>(NOTE: A phase-in of the gas venting and monitoring system may be allowed if indicated in the facility's permit to construct.)</p> <p>Verify that, if the Commissioner requires it, installations with active, inactive, and closed solid waste disposal areas submit construction and installation plans for a gas monitoring and/or venting system.</p> <p>Verify that any Commissioner-approved plans for a gas monitoring and/or venting system, are installed in conformance with the plans and become part of the facility plan.</p> <p>Verify that monitoring of an active, inactive, or closed solid waste disposal area required to install a gas monitoring and/or venting system by the Commissioner is performed according to a Commissioner-approved schedule.</p> <p>(NOTE: Recovery of methane gases for use as a fuel is not prohibited.)</p>
<b>5-23. Solid waste disposal areas must meet requirements for disposal of specific wastes (Regulations of Connecticut State Agencies, Section 22a-209-7(o)).</b>	<p>Verify that hazardous wastes are excluded from solid waste disposal areas.</p> <p>(NOTE: Separate facilities at a solid waste disposal area for disposal of certain hazardous wastes may be approved by the Commissioner.)</p> <p>Verify that special wastes, including liquid waste, are excluded from solid waste disposal areas.</p> <p>(NOTE: The Commissioner may allow disposal of special wastes and liquid wastes in a solid waste disposal area.)</p>
<b>5-24. Solid waste disposal areas must meet recycling requirements (Regulations of Connecticut State Agencies, Section 22a-209-7(p)).</b>	<p>Verify that materials to be recycled are maintained in a separate area and do not interfere with disposal operations.</p> <p>Verify that materials held for recycling are adequately screened from view or are removed at frequent intervals.</p>

<b>COMPLIANCE CATEGORY:</b> <b>Resource Conservation &amp; Recovery Act, Subtitle D (RCRA-D)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>5-25.</b> Employee facilities at solid waste disposal areas must meet requirements (Regulations of Connecticut State Agencies, Section 22a-209-7(q)).</p>	<p>Verify that the solid waste facility has all of the following at or adjacent to the disposal area:</p> <ul style="list-style-type: none"> <li>- adequate shelter and restroom facilities for employees</li> <li>- first aid supplies</li> <li>- telephone or two-way radio communication equipment.</li> </ul>
<p><b>5-26.</b> Solid waste disposal areas must meet air quality requirements (Regulations of Connecticut State Agencies, Section 22a-209-7(r)).</p>	<p>Verify that dust and odors from solid waste disposal area operations are controlled at all times to assure compliance with Department for the Abatement of Air Pollution regulations.</p> <p>Verify that any burning of solid waste complies with Department for the Abatement of Air Pollution regulations regarding open burning.</p>
<p><b>5-27.</b> Solid waste disposal areas must meet bird hazard requirements (Regulations of Connecticut State Agencies, Section 22a-209-7(s)).</p>	<p>Verify that any of the following solid waste disposal areas disposing of putrescible wastes operate in a manner that does not pose a bird hazard to aircraft:</p> <ul style="list-style-type: none"> <li>- located within 10,000 ft of any public airport runway used by turbojet aircraft</li> <li>- located within 5000 ft of any public airport runway used by only piston-type aircraft.</li> </ul> <p>Verify that affirmative measures for bird hazard control are taken as necessary.</p>
<p><b>5-28.</b> Solid waste disposal areas must meet a screening requirement (Regulations of Connecticut State Agencies, Section 22a-209-7(t)).</p>	<p>Verify that the best practical effort is made to screen the solid waste disposal area's working face from view from surrounding residential or business areas.</p>
<p><b>5-29.</b> Installations must meet requirements for disruption of solid waste disposal areas (Regulations of Connecticut State Agencies, Section 22a-209-7(u)).</p>	<p>Verify that the Commissioner approves any excavation, disruption or removal of deposited material at an active, inactive, or closed solid waste disposal area.</p> <p>Verify that all excavation is confined to an area consistent with the number of pieces of digging equipment and/or trucks used for haulage.</p> <p>Verify that all adequate measures are taken to protect the public's health and to control dust, odors, fires, vectors, and blowing litter.</p> <p>Verify that disposal of all solid waste resulting from excavation conforms with these solid waste management requirements.</p>

<b>COMPLIANCE CATEGORY:</b> <b>Resource Conservation &amp; Recovery Act, Subtitle D (RCRA-D)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>5-30.</b> Solid waste disposal areas must meet requirements for protecting endangered species (Regulations of Connecticut State Agencies, Section 22a-209-7(v)).</p>	<p>Verify that solid waste facilities or practices do not cause or contribute to the taking of any endangered or threatened species of plants, fish, or wildlife.</p> <p>Verify that the facility or its practices do not result in destruction or adverse modification of the critical habitat of endangered or threatened species as identified in 50 CFR 17.</p> <p>(NOTE: As used in subsection 50 CFR 17, destruction or adverse modification means a direct or indirect alteration of critical habitat that appreciably diminishes the likelihood of the survival and recovery of threatened or endangered species using that habitat. Taking means harassing, harming, pursuing, hunting, wounding, killing, trapping, capturing, or collecting or attempting to engage in such conduct.)</p>
<p><b>5-31.</b> Solid waste disposal areas must meet requirements for fill limit markers (Regulations of Connecticut State Agencies, Section 22a-209-7(w)).</p>	<p>Verify that the following areas are staked with Commissioner-approved markers:</p> <ul style="list-style-type: none"> <li>- permitted lateral fill limits of a new solid or special waste disposal area</li> <li>- unused portions of an active solid or special waste disposal area.</li> </ul> <p>Verify that the markers are located so neighboring markers can be easily seen.</p> <p>Verify that solid waste is not deposited beyond the line between neighboring markers.</p>
<p><b>SPECIAL WASTE DISPOSAL</b></p>	
<p><b>5-32.</b> Special waste disposal on installations must meet the same permit, operation, and management requirements as solid waste disposal or meet additional requirements (Regulations of Connecticut State Agencies, Section 22a-209-8(e)).</p>	<p>Verify that special waste disposal meets permit, operation, and management requirements for solid waste disposal.</p> <p>(NOTE: Special waste disposal is exempted from some solid waste disposal requirements. Also, there are some additional special considerations for special waste disposal. These exemptions and additions to solid waste disposal requirements are listed in this section on special waste disposal.)</p> <p>(NOTE: Special waste disposal requirements do not prohibit the diversion of special wastes to composting operations or for resources recovery.)</p>

<b>COMPLIANCE CATEGORY:</b> <b>Resource Conservation &amp; Recovery Act, Subtitle D (RCRA-D)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>5-33.</b> Special waste disposal must meet permit requirements (Regulations of Connecticut State Agencies, Section 22a-209-8(a) and (b)).</p>	<p>Verify that an installation operating a solid waste facility specifically for special waste complies with the permit requirements for solid waste facilities.</p> <p>(NOTE: A separate permit to operate or to construct is not required if combined disposal of the waste in question with other solid wastes or special wastes is authorized and the requirements for these special wastes are adequately provided for in the facility plan.)</p>
<p><b>5-34.</b> Combined disposal of special waste and other solid wastes must meet requirements (Regulations of Connecticut State Agencies, Section 22a-209-8(c)).</p>	<p>Verify that any combined disposal of special wastes and other solid wastes or special wastes is approved by the Commissioner and the approval becomes part of the facility plan.</p> <p>Verify that any use of casting sands, contaminated dredge spoils or fly-ash as cover material is approved by the Commissioner.</p>
<p><b>5-35.</b> Facility operators handling special waste disposal must meet specific certification requirements (Regulations of Connecticut State Agencies, Section 22a-209-8(d)).</p>	<p>Verify that facility operators handling special waste have experience or training in the unique characteristics and handling requirements of the special waste that met certification requirements.</p>
<p><b>5-36.</b> Installations disposing of special waste must meet special handling requirements, if required by the Commissioner (Regulations of Connecticut State Agencies, Section 22a-209-8(f)).</p>	<p>Determine if the installation disposes of special wastes.</p> <p>Verify that, if the Commissioner requires it, the following handling requirements are met for special wastes:</p> <ul style="list-style-type: none"> <li>- the installation submits a report for each specific waste on the physical, chemical, and leachate analyses of a representative number of samples of the waste materials, such analyses being conducted by methods approved or prescribed by the Commissioner</li> <li>- pretreatment or dewatering of sludges or other waste materials with high moisture contents</li> <li>- erosion and siltation measures for the disposal of easily eroded materials</li> <li>- dust control measures, including prompt application of cover material, use of water or calcium chloride, all-weather road surfaces, washing of vehicles and use of dust-filtering masks for the disposal of easily airborne waste materials</li> <li>- odor control, including limited working areas and prompt cover and use of masking agents with specific written approval of the Commissioner</li> <li>- equipment maintenance procedures, including frequent inspection and prompt replacement of air filters and other repairs that are needed when handling fine or abrasive waste materials.</li> </ul>



<b>COMPLIANCE CATEGORY:</b> <b>Resource Conservation &amp; Recovery Act, Subtitle D (RCRA-D)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<b>5-36. (continued)</b>	(NOTE: Solid waste disposal requirements for daily cover and groundwater separation distances for disposal of special wastes may be reduced by the Commissioner.)
<b>5-37.</b> Special waste disposal areas that store, dispose of and process scrap tires must meet specific handling requirements (Regulations of Connecticut State Agencies, Section 22a-209-8(g)).	<p>Verify that solid waste facilities with scrap tire storage have Commissioner-approved fire prevention and control measures, including all the following:</p> <ul style="list-style-type: none"> <li>- security fencing</li> <li>- 50-ft-wide fire lanes</li> <li>- heavy-duty fire extinguishers</li> <li>- hydrants or fire ponds.</li> </ul> <p>Verify that arrangements are made with local fire departments for their services.</p> <p>Verify that an installation with a scrap tire storage or processing facility submits to the Commissioner a facility plan for onsite or a description of offsite disposal of all tires that could be held at maximum capacity.</p> <p>Verify that scrap tire processing facilities and tire storage meet the requirements for resources recovery facilities.</p> <p>(NOTE: The daily cover requirements may be reduced for tire disposal. Separation distances for surface or groundwater separation may be waived, or the groundwater separation may be reduced.)</p>
<b>5-38.</b> Special waste disposal areas must meet specific handling requirements for disposal of bulky wastes (Regulations of Connecticut State Agencies, Section 22a-209-8(h)).	<p>Verify that disposal at bulky waste disposal areas is limited to landclearing debris and wastes resulting from demolition activities.</p> <p>(NOTE: Bulky waste disposal areas operated under permits issued before 21 February 1985, may be exempted from the disposal requirements by the Commissioner.)</p> <p>(NOTE: Requirements for daily cover may be reduced, and groundwater separation distance may be reduced, upon approval of the Commissioner.)</p>
<b>5-39.</b> Special waste disposal areas must meet specific handling requirements for asbestos waste (Regulations of Connecticut State Agencies, Section 22a-209-8(i)).	<p>Verify that any asbestos disposal is authorized by the Commissioner.</p> <p>Verify that a copy of the authorization is given to the following people before asbestos disposal occurs:</p> <ul style="list-style-type: none"> <li>- disposal area operator</li> <li>- asbestos waste generator</li> <li>- authorized waste hauler.</li> </ul>

COMPLIANCE CATEGORY: Resource Conservation & Recovery Act, Subtitle D (RCRA-D) Connecticut Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS:
<p><b>5-39. (continued)</b></p>	<p>Verify that the disposal area operator makes sure the following requirements are met before asbestos waste is accepted:</p> <ul style="list-style-type: none"> <li>- asbestos is packaged in impermeable dust-tight containers such as heavy-duty 6 mil. plastic bags or sealed fiber pack drums</li> <li>- all containers are labeled in large, readable letters that say, <b>CONTAINS ASBESTOS - AVOID OPENING OR BREAKING CONTAINER - BREATHING ASBESTOS IS HAZARDOUS TO YOUR HEALTH</b></li> <li>- the asbestos is transported separately from other waste materials.</li> </ul> <p>Verify that asbestos is deposited at the base of the disposal area's working face without breaking or opening of containers.</p> <p>Verify that asbestos containers are covered with 9 in. of cover material.</p> <p>(NOTE: The Commissioner may approve a dry nonasbestos waste material as an alternate cover material for asbestos containers.)</p>
<p><b>SOLID WASTE TRANSFER STATIONS</b></p>	
<p><b>5-40.</b> Solid waste transfer stations must meet permit requirements (Regulations of Connecticut State Agencies, Section 22a-209-9(a) and (b)).</p>	<p>Verify that solid waste transfer stations meet requirements for permits for solid waste facilities.</p>
<p><b>5-41.</b> Solid waste transfer stations must meet access requirements (Regulations of Connecticut State Agencies, Section 22a-209-9(c)(1) and (2)).</p>	<p>Verify that a sign is posted at the facility entrance which states the following:</p> <ul style="list-style-type: none"> <li>- permittee's name</li> <li>- hours of operation</li> <li>- authorized users</li> <li>- required safety precautions.</li> </ul> <p>Verify that access to the facility is controlled through use of appropriate fences, gates, and signs to prevent unauthorized use.</p>
<p><b>5-42.</b> Solid waste transfer stations must meet enclosure requirements (Regulations of Connecticut State Agencies, Section 22a-209-9(d)).</p>	<p>Verify that a building roofed and enclosed on all sides, or otherwise enclosed to control dust and litter, is provided.</p>

<b>COMPLIANCE CATEGORY:</b> <b>Resource Conservation &amp; Recovery Act, Subtitle D (RCRA-D)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>5-43.</b> Solid waste transfer stations must meet screening requirements (Regulations of Connecticut State Agencies, Section 22a-209-9(e)).</p>	<p>Verify that screening from view is provided for a transfer station located within 500 ft of a residence.</p>
<p><b>5-44.</b> Solid waste transfer stations must meet the requirement for a certified operator (Regulations of Connecticut State Agencies, Section 22a-209-9(f)).</p>	<p>Verify that a certified operator is present at all times during working hours.</p>
<p><b>5-45.</b> Solid waste transfer stations must meet storage requirements (Regulations of Connecticut State Agencies, Section 22a-209-9(g)).</p>	<p>Verify that no solid waste is stored within the property boundary for more than 48 h.</p> <p>(NOTE: Solid waste storage at transfer stations may exceed 48 h if a legal holiday weekend is involved, or the Commissioner approves lengthier storage times.)</p> <p>Verify that a minimum storage capacity of 24 h is provided for solid wastes in transfer stations with a design capacity exceeding 100 tons of solid wastes per 8-h day.</p>
<p><b>5-46.</b> Solid waste transfer stations must allow only solid waste unloading within the enclosed structure and approved designated areas (Regulations of Connecticut State Agencies, Section 22a-209-9(h)).</p>	<p>Verify that unloading of solid waste takes place only in the enclosed structure and/or a designated area which has been approved by the Commissioner.</p> <p>Verify that scavenging does not occur in the unloading area.</p>
<p><b>5-47.</b> Solid waste transfer stations must control litter (Regulations of Connecticut State Agencies, Section 22a-209-9(i)).</p>	<p>Verify that solid waste is confined to the unloading, loading, and handling area.</p> <p>Verify that transfer stations and adjacent areas are kept clean and reasonably free of litter.</p>

<b>COMPLIANCE CATEGORY:</b> <b>Resource Conservation &amp; Recovery Act, Subtitle D (RCRA-D)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>5-48.</b> Solid waste transfer stations must meet requirements for hazardous and special wastes (Regulations of Connecticut State Agencies, Section 22a-209-9(j)).</p>	<p>Verify that hazardous and special wastes are excluded from solid waste transfer stations.</p> <p>(NOTE: The Commissioner may allow special handling for hazardous and special wastes at solid waste transfer stations.)</p>
<p><b>5-49.</b> Solid waste transfer stations must meet air quality requirements (Regulations of Connecticut State Agencies, Section 22a-209-9(k)).</p>	<p>Verify that dust and odors from solid waste unloading and transfer station operations are controlled at all times to assure compliance with the applicable regulations of the Department for the Abatement of Air Pollution.</p> <p>Verify that any open burning of solid waste is conducted in compliance with Department for the Abatement of Air Pollution regulations.</p>
<p><b>5-50.</b> Solid waste transfer stations must meet fire control requirements (Regulations of Connecticut State Agencies, Section 22a-209-9(l)).</p>	<p>Verify that the following are not accepted at the solid waste transfer station:</p> <ul style="list-style-type: none"> <li>- burning solid waste</li> <li>- solid waste at a temperature likely to cause fire</li> <li>- solid waste of a highly flammable or explosive nature.</li> </ul> <p>Verify that adequate equipment is provided for fire control.</p> <p>Verify that arrangements are made with the local fire protection agency to acquire services immediately when needed.</p> <p>Verify that the Department's Solid Waste Management Unit is immediately notified when a fire occurs.</p>
<p><b>5-51.</b> Solid waste transfer stations must meet vector control requirements (Regulations of Connecticut State Agencies, Section 22a-209-9(m)).</p>	<p>Verify that conditions are unfavorable for the harboring, feeding, and breeding of vectors.</p> <p>Verify that, when required by the Commissioner, additional action is taken to control and exterminate vectors.</p>
<p><b>5-52.</b> Solid waste transfer stations must do routine operational maintenance (Regulations of Connecticut State Agencies, Section 22a-209-9(n)).</p>	<p>Verify that provision is made for routine operational maintenance of the transfer station and appurtenances.</p>

<b>COMPLIANCE CATEGORY:</b> <b>Resource Conservation &amp; Recovery Act, Subtitle D (RCRA-D)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>5-53.</b> Solid waste transfer stations must meet shutdown requirements (Regulations of Connecticut State Agencies, Section 22a-209-9(o)).</p> <p><b>5-54.</b> Solid waste transfer stations must meet recordkeeping requirements (Regulations of Connecticut State Agencies, Section 22a-209-9(p)).</p> <p><b>5-55.</b> Temporary solid waste transfer stations must meet requirements (Regulations of Connecticut State Agencies, Section 22a-209-9(q)).</p>	<p>Verify that a Commissioner-approved alternative method for waste disposal is available if the transfer station is somehow rendered inoperable.</p> <p>Verify that the Department is notified within 24 h when a shutdown occurs.</p> <p>Verify that daily records are kept in a manner acceptable to the Commissioner.</p> <p>Verify that records include each of the following:</p> <ul style="list-style-type: none"> <li>- measured weights or estimated tonnage of wastes received from each community using the transfer station</li> <li>- total weights from other sources</li> <li>- specific sites where waste was delivered for disposal</li> <li>- tonnage of material removed for resources recovery and the markets used.</li> </ul> <p>Verify that records are available for inspection by Department employees.</p> <p>Verify that monthly summaries of these records are submitted to the Department no later than 10 days after the last day of each quarter of the calendar year.</p> <p>Verify that a solid waste transfer station operating for less than 2 yr has a variance.</p> <p>(NOTE: The Commissioner will prescribe guidelines for the design and operation of solid waste transfer stations that will operate for less than 2 yr.)</p>

<b>COMPLIANCE CATEGORY:</b> <b>Resource Conservation &amp; Recovery Act, Subtitle D (RCRA-D)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>RESOURCES RECOVERY FACILITIES, OTHER VOLUME REDUCTION PLANTS, AND BIOMEDICAL WASTE TREATMENT FACILITIES</b></p> <p><b>5-56.</b> Resources recovery facilities, other volume reduction plants, and biomedical waste treatment facilities must meet permit requirements (Regulations of Connecticut State Agencies, Section 22a-209-10(a) and (b)).</p> <p><b>5-57.</b> Resources recovery facilities, other volume reduction plants, and biomedical waste treatment facilities must meet access requirements (Regulations of Connecticut State Agencies, Section 22a-209-10(c)).</p> <p><b>5-58.</b> Resources recovery facilities, other volume reduction plants, and biomedical waste treatment facilities must meet storage requirements (Regulations of Connecticut State Agencies, Section 22a-209-10(d)).</p> <p><b>5-59.</b> Resources recovery facilities, other volume reduction plants, and biomedical waste treatment facilities must meet requirements for working areas (Regulations of Connecticut State Agencies, Section 22a-209-10(e)).</p>	<p>Verify that any resources recovery facility, volume reduction plant or biomedical waste treatment facility meets requirements for permits for solid waste facilities.</p> <p>Verify that a sign is posted at the facility entrance stating the following:</p> <ul style="list-style-type: none"> <li>- permittee's name</li> <li>- hours of operation</li> <li>- authorized users</li> <li>- required safety precautions.</li> </ul> <p>Verify that access to the facility is controlled through use of appropriate fences, gates, and signs to prevent unauthorized use.</p> <p>Verify that no solid waste is stored within the property boundary for more than 48 h.</p> <p>(NOTE: Solid waste storage may exceed 48 h if a legal holiday weekend is involved or if the Commissioner approves lengthier storage times.)</p> <p>Verify that unloading of solid waste takes place only in an enclosed structure and/or designated areas that have been approved by the Commissioner.</p> <p>Verify that scavenging does not occur in the unloading area.</p>

<b>COMPLIANCE CATEGORY:</b> <b>Resource Conservation &amp; Recovery Act, Subtitle D (RCRA-D)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>5-60.</b> Resources recovery facilities, other volume reduction plants, and biomedical waste treatment facilities must control litter (Regulations of Connecticut State Agencies, Section 22a-209-10(f)).</p>	<p>Verify that solid waste is confined to the unloading, loading, and handling area.</p> <p>Verify that the facility and adjacent areas are kept clean and reasonably free of litter.</p>
<p><b>5-61.</b> Resources recovery facilities, other volume reduction plants, and biomedical waste treatment facilities must meet the requirement for certified operators (Regulations of Connecticut State Agencies, Section 22a-209-10(g)).</p>	<p>Verify that a certified operator is present at all times during working hours.</p>
<p><b>5-62.</b> Resources recovery facilities and other volume reduction plants must exclude specific wastes from their operations (Regulations of Connecticut State Agencies, Section 22a-209-10(h)).</p>	<p>Verify that hazardous and special wastes are excluded from facilities or plants.</p> <p>(NOTE: The Commissioner may allow special handling for hazardous and special wastes at facilities or plants.)</p>
<p><b>5-63.</b> Resources recovery facilities, other volume reduction plants and biomedical waste treatment facilities must meet air quality requirements (Regulations of Connecticut State Agencies, Section 22a-209-10(i)).</p>	<p>Verify that air emissions, dust, and odors resulting from the unloading of solid waste and the operation of the facility or plant are controlled at all times to assure compliance with applicable Department for the Abatement of Air Pollution regulations.</p>

<b>COMPLIANCE CATEGORY:</b> <b>Resource Conservation &amp; Recovery Act, Subtitle D (RCRA-D)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>5-64.</b> Resources recovery facilities, other volume reduction plants, and biomedical waste treatment facilities must meet fire control requirements (Regulations of Connecticut State Agencies, Section 22a-209-10(j)).</p>	<p>Verify that fire control equipment is provided.</p> <p>Verify that arrangements are made with the local fire protection agency to get services immediately when needed.</p> <p>Verify that the Department's Bureau of Waste Management is immediately notified when a fire occurs.</p>
<p><b>5-65.</b> Resources recovery facilities, other volume reduction plants, and biomedical waste treatment facilities must meet explosion requirements (Regulations of Connecticut State Agencies, Section 22a-209-10(k)).</p>	<p>Verify that the facility or plant provides for explosion protection.</p> <p>Verify that the Department's Bureau of Waste Management is immediately notified when an explosion occurs.</p>
<p><b>5-66.</b> Resources recovery facilities, other volume reduction plants, and biomedical waste treatment facilities must meet shutdown requirements (Regulations of Connecticut State Agencies, Section 22a-209-10(l)).</p>	<p>Verify that a Commissioner-approved alternative method for the processing or transferring and disposal of solid waste is available if the facility or plant is somehow rendered inoperable.</p> <p>Verify that the Department is notified within 24 h when a shutdown occurs.</p>
<p><b>5-67.</b> Resources recovery facilities, other volume reduction plants, and biomedical waste treatment facilities must meet recordkeeping requirements (Regulations of Connecticut State Agencies, Section 22a-209-10(m)).</p>	<p>Verify that daily records are kept in a manner acceptable to the Commissioner.</p> <p>Verify that records include each of the following:</p> <ul style="list-style-type: none"> <li>- measured weights or estimated tonnage of wastes received from each municipality or generator of biomedical waste</li> <li>- total weights from other sources</li> <li>- tonnage processed</li> <li>- tonnage of residue delivered for disposal and specific sites used</li> <li>- materials removed for resources recovery and markets used.</li> </ul> <p>Verify that monthly summaries of these records are submitted to the Department no later than 10 days after the last day of each quarter of the calendar year.</p>



<b>COMPLIANCE CATEGORY:</b> <b>Resource Conservation &amp; Recovery Act, Subtitle D (RCRA-D)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>5-68.</b> Resources recovery facilities, other volume reduction plants, and biomedical waste treatment facilities must meet requirements for temporary facilities (Regulations of Connecticut State Agencies, Section 22a-209-10(n)).</p> <p><b>BIOMEDICAL WASTE</b></p> <p><b>5-69.</b> Installations storing biomedical waste must meet requirements (Regulations of Connecticut State Agencies, Section 22a-209-15(c)).</p> <p><b>5-70.</b> Installations that transfer biomedical waste must meet requirements (Regulations of Connecticut State Agencies, Section 22a-209-15(d)).</p>	<p>Verify that a facility or plant that will operate for less than 2 yr has a variance.</p> <p>(NOTE: The Commissioner will prescribe guidelines for the design and operation of facilities or plants that will operate for less than 2 yr.)</p> <p>Verify that biomedical waste storage meets the following requirements:</p> <ul style="list-style-type: none"> <li>- biomedical waste is not mixed with other materials</li> <li>- outdoor storage areas, such as dumpsters or sheds, are locked</li> <li>- a sign displaying the universal biohazard symbol is posted wherever biomedical waste is stored</li> <li>- biomedical waste is not compacted or subjected to violent mechanical stress.</li> </ul> <p>Verify that biomedical waste is stored in areas that are accessible only to those persons authorized by the generator, transporter, or solid waste facility operator, as applicable, to handle biomedical waste.</p> <p>Verify that biomedical waste is stored so the integrity of its packaging is maintained and the waste is protected from water, precipitation, and wind.</p> <p>Verify that all biomedical waste storage areas are constructed of finished materials that are impermeable and are capable of being easily maintained in a sanitary condition.</p> <p>Verify that biomedical waste is stored only in a nonputrescent state.</p> <p>(NOTE: To maintain a nonputrescent state, biomedical waste may be refrigerated during storage.)</p> <p>Verify that stored biomedical waste is protected from animals and does not provide a breeding place or food source for insects or rodents.</p> <p>Verify that handling of biomedical waste during transfer does not impair the integrity of its packaging.</p> <p>Verify that trash chutes are not used to transfer biomedical waste.</p> <p>Verify that biomedical waste is not compacted or subjected to violent mechanical stress during transfer.</p>

<b>COMPLIANCE CATEGORY:</b> <b>Resource Conservation &amp; Recovery Act, Subtitle D (RCRA-D)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>5-71.</b> Biomedical waste that will be stored, treated, or disposed of at the site it was generated must meet requirements (Regulations of Connecticut State Agencies, Section 22a-209-15(b)(6) and (b)(2)).</p>	<p>Determine if the biomedical waste will be stored, treated, or disposed of at the site where it was generated.</p> <p>Verify that the biomedical waste is segregated from solid waste to the extent practicable and is segregated by the following categories:</p> <ul style="list-style-type: none"> <li>- sharps and any residual substances in them</li> <li>- body fluids in a quantity greater than 20 cm<sup>3</sup></li> <li>- other biomedical waste.</li> </ul> <p>Verify that the biomedical waste meets requirements for packaging in primary containers.</p>
<p><b>5-72.</b> Biomedical waste that is chemotherapy waste must be incinerated (Regulations of Connecticut State Agencies, Section 22a-209-15(f)(3)(A)).</p>	<p>Verify that chemotherapy waste is only disposed of by incineration.</p>
<p><b>5-73.</b> Biomedical waste that is pathological waste must be incinerated or interred (Regulations of Connecticut State Agencies, Section 22a-209-15(f)(3)(B)).</p>	<p>Verify that pathological waste is disposed of only by incineration or interment.</p>
<p><b>5-74.</b> Disposal of biomedical waste that is infectious waste must meet requirements (Regulations of Connecticut State Agencies, Section 22a-209-15(f)(3)(C)).</p>	<p>Verify that infectious waste is disposed of in one of the following ways:</p> <ul style="list-style-type: none"> <li>- incineration</li> <li>- discharge to a sanitary sewer, provided that the waste is in liquid or semi-solid form, that secondary treatment is available at the publicly owned treatment works or privately owned treatment works where the waste is headed, that local law does not prohibit such a discharge, that all permits and other authorizations required by law have been obtained for such a discharge, and that aerosol formation is minimized during such a discharge to a sanitary sewer</li> <li>- any other method approved by the Commissioner.</li> </ul>
<p><b>5-75.</b> Decontaminated biomedical waste that still looks like biomedical waste must meet biomedical waste requirements (Regulations of Connecticut State Agencies, Section 22a-209-15(f)(7)).</p>	<p>Verify that decontaminated biomedical waste meets biomedical waste requirements.</p> <p>(NOTE: Decontaminated biomedical waste that is so physically altered as to no longer look like biomedical waste does not have to meet biomedical waste requirements.</p>

<b>COMPLIANCE CATEGORY:</b> <b>Resource Conservation &amp; Recovery Act, Subtitle D (RCRA-D)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>5-76.</b> Biomedical waste that is treated and disposed of at the site it was generated must meet management requirements (Regulations of Connecticut State Agencies, Sect. 22a-209-15(f)(8)).</p>	<p>Verify that when biomedical waste is treated or disposed of at the site where it was generated, the generator develops written procedures for each treatment or disposal method in use at the site and for ensuring compliance with the procedures.</p> <p>Verify that the procedures developed are incorporated into the biomedical waste management plan required of each biomedical waste generator.</p> <p>Verify that the procedures developed for treatment or disposal methods used at the site meet all the following requirements:</p> <ul style="list-style-type: none"> <li>- assure the effectiveness of any treatment method in use and reflect acceptable standards of practice.</li> <li>- provide for and conduct an ongoing program of staff training on the implementation of such procedures and biomedical waste requirements</li> <li>- provide for a quality assurance/quality control program to assure compliance with the biomedical waste management plan.</li> </ul>
<p><b>BIOMEDICAL WASTE TRANSPORTATION</b></p>	
<p><b>5-77.</b> Biomedical waste transporters must have permits (Regulations of Connecticut State Agencies, Sect. 22a-209-15(b)(9) and (g)(1)).</p>	<p>Verify that no person transports or accepts for transport biomedical waste unless the person has a permit issued by the Commissioner.</p> <p>Verify that no person hires or uses a transporter for biomedical waste transportation unless the transporter has a permit.</p>
<p><b>5-78.</b> Biomedical waste transporters must transport only biomedical waste that has met packaging requirements (Regulations of Connecticut State Agencies, Sect. 22a-209-15(e) and (b)(4)).</p>	<p>Verify that the generator has met the packaging requirements by placing biomedical waste in containers that are:</p> <ul style="list-style-type: none"> <li>- rigid</li> <li>- leak-resistant</li> <li>- impervious to moisture</li> <li>- sufficiently strong to prevent tearing or bursting under normal conditions of use and handling</li> <li>- sealed to prevent leakage.</li> </ul> <p>Verify that sharps and any residual substances in them are in puncture-resistant containers that meet the packaging requirements.</p>

<b>COMPLIANCE CATEGORY:</b> <b>Resource Conservation &amp; Recovery Act, Subtitle D (RCRA-D)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<b>5-78. (continued)</b>	<p>Verify that the generator's handling of an oversized biomedical waste item too large for standard-sized containers meets the following conditions:</p> <ul style="list-style-type: none"> <li>- handled in a manner minimizing contact with transport workers and the public</li> <li>- has a water-resistant tag identifying in indelible writing the generator's name, address, and phone number enclosed with or affixed to the item</li> <li>- the generator has indicated any special handling instructions for the item on the tracking form.</li> </ul> <p>Verify that the generator has not taken a biomedical waste container and reused it for biomedical waste or for any other purpose.</p> <p>(NOTE: A container can be reused if the surfaces of the container were protected from contamination through use of a liner, bag or other device that was removed with the waste or the container has been thoroughly washed to remove any visible indication and then disinfected in the same manner that is required of contaminated vehicle surfaces.)</p>
<b>5-79.</b> Biomedical waste transporters must transport only biomedical waste that meets labeling requirements (Regulations of Connecticut State Agencies, Sect. 22a-209-15(e)(1) and (b)(7)).	<p>Verify that the generator has affixed to, or imprinted on the outside of each container a water-resistant label displaying in indelible writing the universal biohazard symbol or the words, <b>MEDICAL WASTE</b> or <b>INFECTIOUS WASTE</b>.</p> <p>(NOTE: A label is not required for a container of biomedical waste that has been decontaminated but not treated, but such a container must meet marking requirements.)</p>
<b>5-80.</b> Biomedical waste transporters must transport only biomedical waste that has met marking requirements (Regulations of Connecticut State Agencies, Sect. 22a-209-15(e)(1) and (b)(8)).	<p>Verify that the generator affixes a water-resistant identification tag to the outside of both primary and secondary containers that meets all these requirements:</p> <ul style="list-style-type: none"> <li>- 3 in. by 5 in.</li> <li>- indicates in indelible writing the generator's name and address</li> <li>- tag on secondary container indicates in indelible writing the name, address, location, and permit number of the first transporter and the date the waste was accepted from the generator.</li> </ul> <p>Verify that when biomedical waste is transported by more than one transporter, each transporter other than the one who originally accepted the waste affixes a water resistant tag on the outside of the secondary container that meets all the following requirements:</p> <ul style="list-style-type: none"> <li>- 3 in. by 5 in.</li> <li>- affixed so that previously affixed identification cards are not hidden</li> <li>- the additional tag indicates in indelible writing the name, address, location, and permit number of the transporter affixing the tag and the date that the transporter accepted the waste.</li> </ul>

**COMPLIANCE CATEGORY:**  
**Resource Conservation & Recovery Act, Subtitle D (RCRA-D)**  
**Connecticut Supplement**

<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>5-81.</b> Biomedical waste transporters must transport only biomedical waste that is accompanied by a tracking form (Regulations of Connecticut State Agencies, Sect. 22a-209-15(e)(2)).</p> <p><b>5-82.</b> Vehicles used by biomedical waste transporters must meet requirements (Regulations of Connecticut State Agencies, Sect. 22a-209-15(e)(3)).</p> <p><b>5-83.</b> Biomedical waste must only be transported in a nonputrescent state (Regulations of Connecticut State Agencies, Sect. 22a-209-15(e)(4)).</p> <p><b>5-84.</b> Cargo compartments holding biomedical waste must meet labeling requirements (Regulations of Connecticut State Agencies, Sect. 22a-209-15(e)(5)).</p> <p><b>5-85.</b> Biomedical waste spills must be decontaminated (Regulations of Connecticut State Agencies, Sect. 22a-209-15(e)(6)).</p>	<p>Verify that any biomedical waste accepted for transport is accompanied by a tracking form and that the generator has met all tracking form requirements.</p> <p>Verify that biomedical waste is transported in a fully enclosed, leak-resistant cargo compartment.</p> <p>Verify that biomedical waste is not subjected to compaction or violent mechanical stress during loading and unloading.</p> <p>Verify that each cargo compartment is constructed of impermeable materials and kept free of visible contamination.</p> <p>Verify that no cargo compartment is used to transport any food or drink intended for human or animal consumption.</p> <p>Verify that each cargo compartment is locked when left unattended.</p> <p>Verify that the transporter is transporting only biomedical waste in a non-putrescent state.</p> <p>(NOTE: To maintain a nonputrescent state, biomedical waste may be refrigerated during transport.)</p> <p>Verify that the following are displayed on the two sides and back of each cargo compartment of a biomedical waste transporter:</p> <ul style="list-style-type: none"> <li>- transporter name and permit number</li> <li>- the words MEDICAL WASTE in letters at least 3 in. high and in a color contrasting with the color of the compartment.</li> </ul> <p>Verify that vehicle surfaces that have had contact with biomedical waste spills or leaks are decontaminated by cleaning with an industrial-strength detergent and one of the following procedures:</p> <ul style="list-style-type: none"> <li>- exposure to water of at least 180 °F for at least 30 s</li> <li>- exposure to a chemical sanitizer through 3 min of rinsing with or immersion in hypochlorite with 500 ppm available chlorine, phenolic solution with 500 ppm active agent, iodoform solution with 100 ppm available iodine, or quaternary ammonium solution with 400 ppm active agent.</li> </ul>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>5-86.</b> Personnel loading or unloading biomedical waste onto or off a vehicle must wear personal protective equipment (Regulations of Connecticut State Agencies, Sect. 22a-209-15(e)(7)).</p> <p><b>5-87.</b> Vehicles carrying biomedical waste must carry a spill cleanup kit (Regulations of Connecticut State Agencies, Sect. 22a-209-15(e)(8)).</p>	<p>Verify that any personnel unloading or loading biomedical waste on or off a vehicle is wearing the personal protective equipment required by law.</p> <p>Verify that each vehicle carrying biomedical waste has a spill cleanup kit.</p> <p>Verify that the kit contains enough absorbent material to absorb at least 10 gal of liquid.</p> <p>Verify that the kit has 1 gal of hospital-grade disinfectant in a sprayer capable of dispersing its charge both in a mist and in a stream at a distance of 10 ft.</p> <p>Verify that the kit has 50 red plastic bags, seals, and labels, with the bags meeting specifications for the packaging of biomedical waste for transport and of a size large enough to enclose any standard-sized biomedical waste container.</p> <p>Verify that the kit includes clean, impermeable overalls, gloves, boots, caps, and surgical masks for use by at least two persons that meet all the following conditions:</p> <ul style="list-style-type: none"> <li>- boots and caps are fitted to the persons intended to wear them</li> <li>- boots and caps are made of Tyvek, a registered trademark, or material that provides equivalent protection</li> <li>- top boot coverings are at least 75 mil thick</li> <li>- boot soles are at least three-quarters of an inch thick</li> <li>- boot heels are at least 1 1/4 in. thick</li> <li>- gloves are 25 mils thick and of heavy neoprene or material that provides equivalent protection</li> </ul> <p>Verify that the kit includes duct tape for sealing clothing at the wrists and ankles.</p> <p>Verify that the kit contains all the following:</p> <ul style="list-style-type: none"> <li>- a fire extinguisher</li> <li>- boundary marking tape</li> <li>- a high-intensity flashlight</li> <li>- an American National Red Cross standard 24-unit first aid kit or its equivalent.</li> </ul>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>5-88.</b> The response to a biomedical waste spill must meet requirements (Regulations of Connecticut State Agencies, Sect. 22a-209-15(e)(9)).</p>	<p>Verify that personnel responding to a biomedical waste spill wear the required cleanup apparel and use the required surgical masks and duct tape.</p> <p>Verify that the spill area is secured.</p> <p>Verify that enough absorbent material is applied in and around the spill area so that all liquid spillage is contained and absorbed.</p> <p>Verify that damaged containers and spilled biomedical waste are placed in the bags required in the cleanup kit.</p> <p>Verify that the area is decontaminated and other cleanup measures are taken as appropriate for the situation.</p> <p>Verify that reusable components of the cleanup kit are cleaned and decontaminated.</p> <p>Verify that reusable components of apparel and related equipment are cleaned and decontaminated before disrobing.</p> <p>Verify that apparel and related equipment are removed and disposable items are placed in the bags required in the cleanup kit.</p> <p>Verify that nonreusable components of the cleanup kit are replaced.</p>
<p><b>5-89.</b> Biomedical waste must be accompanied by a tracking form in order to be accepted at a solid waste facility (Regulations of Connecticut State Agencies, Sect. 22a-209-15(f)(2)).</p>	<p>Verify that biomedical waste is accompanied by a tracking form that meets requirements for tracking biomedical waste.</p>
<p><b>BIOMEDICAL WASTE INCINERATION</b></p>	
<p><b>5-90.</b> Delivery, or causing the delivery, of biomedical waste to an incinerator must meet requirements (Regulations of Connecticut State Agencies, Sect. 22a-209-15(f)(4)(A)).</p>	<p>Verify that no person delivers or causes delivery of biomedical waste to any incinerator, whether outside or inside of Connecticut, unless the incinerator complies with all applicable laws.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>5-91.</b> Operation of an incinerator that burns biomedical waste must meet requirements (Regulations of Connecticut State Agencies, Sect. 22a-209-15(f)(4)(B)).</p>	<p>Verify that no person operates an incinerator where biomedical waste is burned unless the incinerator complies with all applicable laws, including, but not limited to Regulations of Connecticut State Agencies, Sections 22a-174-1 through 22a-174-29 of the Regulations of Connecticut State Agencies.</p>
<p><b>5-92.</b> Biomedical waste incinerator residue must be managed as a special waste (Regulations of Connecticut State Agencies, Sect. 22a-209-15(f)(5)).</p>	<p>Verify that biomedical waste incinerator residue management meets the special handling requirements for special waste.</p>
<p><b>BIOMEDICAL WASTE STERILIZATION</b></p>	
<p><b>5-93.</b> Operation of a gravity flow or vacuum-type steam sterilizer to decontaminate biomedical waste must meet requirements (Regulations of Connecticut State Agencies, Sect. 22a-209-15(f)(6)(A), (B) and (C)).</p>	<p>Verify that in a gravity flow sterilizer, biomedical waste is subjected to a temperature of not less than 250 °F (121 °C) at 15 psig for no less than 60 min.</p> <p>Verify that in a vacuum-type sterilizer, biomedical waste is subjected to a temperature of not less than 270 °F (132 °C) at 27 psig for no less than 45 min.</p> <p>(NOTE: The commissioner may approve a different combination of operational time, temperature, and pressure for steam sterilization.)</p>
<p><b>5-94.</b> Sterilization of biomedical waste within its primary container must meet requirements (Regulations of Connecticut State Agencies, Sect. 22a-209-15(f)(6)(D)).</p>	<p>Verify that biomedical waste is steam sterilized in its primary container.</p> <p>Verify that the primary container is placed in the sterilization chamber so there is enough space between the chamber walls and the container to allow the steam to penetrate the container.</p> <p>Verify that the primary container is then unsealed to allow the steam to penetrate the contents of the container.</p>



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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>5-95.</b> Steam sterilizers not equipped to continuously monitor and record temperatures during the sterilization cycle must meet requirements (Regulations of Connecticut State Agencies, Sect. 22a-209-15(f)(6)(E)).</p>	<p>Verify that the steam sterilizer operator affixes to the primary container temperature-sensitive tape that will indicate when the desired temperature is reached.</p> <p>(NOTE: Biomedical waste is not considered decontaminated unless the temperature-sensitive tape indicates that at least 250 °F (121 °C) was reached during the sterilization process.)</p> <p>Verify that steam sterilizers used for the first time after the EFFECTIVE DATE OF THIS SECTION (January 1990) automatically and continuously monitor and record temperatures throughout the entire length of each sterilization cycle.</p>
<p><b>5-96.</b> Steam sterilizers must be regularly evaluated for sterilization effectiveness (Regulations of Connecticut State Agencies, Sect. 22a-209-15(f)(6)(F)).</p>	<p>Verify that steam sterilizer tests are conducted at least once every 40 h to evaluate sterilization process effectiveness, including tests of the capacity of the process to kill <i>Bacillus stearothermophilus</i>.</p> <p>Verify that a log is maintained recording test dates and results.</p>
<p><b>5-97.</b> Steam sterilizers must be regularly evaluated regarding temperature and pressure (Regulations of Connecticut State Agencies, Sect. 22a-209-15(f)(6)(G)).</p>	<p>Verify that steam sterilizers are evaluated at least once every 40 h regarding proper operation for temperature and pressure.</p> <p>Verify that a log is maintained recording the dates and results of the evaluations and the calibration dates.</p>
<p><b>5-98.</b> Logs must be kept for each sterilization unit (Regulations of Connecticut State Agencies, Sect. 22a-209-15(f)(6)(H)).</p>	<p>Verify that a log is kept for each sterilization unit that maintains (for each use) all the following information:</p> <ul style="list-style-type: none"> <li>- date</li> <li>- time</li> <li>- operator</li> <li>- type and approximate amount of biomedical waste treated</li> <li>- sterilization pressure reading and post-sterilization reading on the temperature sensitive tape.</li> </ul>

COMPLIANCE CATEGORY: Resource Conservation & Recovery Act, Subtitle D (RCRA-D) Connecticut Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS:
<p><b>BIOMEDICAL WASTE - SMALL QUANTITY GENERATORS (SQGs)</b></p> <p><b>5-99.</b> SQGs transporting their waste without biomedical waste transporter permits must meet requirements for identifying biomedical waste (Regulations of Connecticut State Agencies, Section 22a-209-15(g)(2)(A) and (b)(1)).</p> <p><b>5-100.</b> SQGs transporting their waste without biomedical waste transporter permits must meet requirements for segregation of biomedical waste (Regulations of Connecticut State Agencies, Section 22a-209-15(g)(2)(A) and (b)(2)).</p> <p><b>5-101.</b> A SQG transporting his waste without a biomedical waste transporter permit must prepare a written biomedical waste management plan or plans (Regulations of Connecticut State Agencies, Section 22a-209-15(g)(2)(A) and (b)(3)).</p>	<p>Verify that biomedical waste generators identify the solid waste generated that is biomedical waste.</p> <p>Verify that the generator segregates biomedical waste from other solid waste to the extent practicable before placing biomedical waste in primary containers.</p> <p>Verify that biomedical waste is segregated into the following categories:</p> <ul style="list-style-type: none"> <li>- sharps and any residual substances in them</li> <li>- body fluids in a quantity greater than 20 cm<sup>3</sup></li> <li>- other biomedical waste.</li> </ul> <p>Verify that SQGs transporting waste without a biomedical waste transporter permit have a written biomedical waste management plan for each facility where they generate biomedical waste.</p> <p>Verify that the biomedical waste management plan establishes policies and procedures for segregating biomedical waste according to the segregation requirements.</p> <p>Verify that the plan requires all of the following:</p> <ul style="list-style-type: none"> <li>- biomedical waste mixed with hazardous waste is managed as hazardous waste</li> <li>- biomedical waste mixed with radioactive material is managed as radioactive material</li> <li>- solid waste that is neither hazardous nor radioactive but that is mixed with biomedical waste is managed as biomedical waste</li> <li>- any of the three categories of biomedical waste is not mixed with or placed in a primary container with another of the three categories of biomedical waste.</li> </ul>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>5-102.</b> The SQG transporting his waste without a biomedical waste transporter permit must meet packaging, labeling, and marking requirements (Regulations of Connecticut State Agencies, Section 22a-209-15(g)(2)(A) and (b)(4), (7), and (8)).</p>	<p>Verify that SQGs transporting waste without a biomedical waste transporter permit meets packaging, labeling, and marking requirements.</p>
<p><b>5-103.</b> SQGs transporting their waste without biomedical waste transporter permits must meet requirements for personal protective equipment (Regulations of Connecticut State Agencies, Section 22a-209-15(g)(2)(A) and (b)(5)).</p>	<p>Verify that persons packaging biomedical waste wear personal protective equipment.</p>
<p><b>5-104.</b> SQGs transporting their waste without biomedical waste transporter permits must use a lawfully operated solid waste facility or another of the generator's place of business (Regulations of Connecticut State Agencies, Section 22a-209-15(g)(2)(B)).</p>	<p>Verify that SQGs transporting their waste without biomedical waste transporter permits transport their biomedical waste to one of the following:</p> <ul style="list-style-type: none"> <li>- a lawfully operated solid waste facility where the generator has a written agreement to deliver biomedical waste</li> <li>- another of the generator's places of business in Connecticut.</li> </ul>
<p><b>5-105.</b> SQGs transporting their waste without biomedical waste transporter permits must transport their own waste themselves or use an employee (Regulations of Connecticut State Agencies, Section 22a-209-15(g)(2)(C)).</p>	<p>Verify that SQGs transporting waste without a biomedical waste transporter permit transport the waste themselves or authorizes their employees in writing to do it.</p> <p>Verify that SQGs transporting waste without a biomedical waste transporter permit transport the biomedical waste in a vehicle they own or one that is owned by the authorized employee.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>5-106.</b> SQGs transporting their waste without biomedical waste transporter permits must meet recordkeeping requirements (Regulations of Connecticut State Agencies, Section 22a-209-15(g)(2)(D) and (i)(4)).</p>	<p>Verify that SQGs transporting waste without biomedical waste transporter permits keep a log meeting all the following requirements:</p> <ul style="list-style-type: none"> <li>- an entry for each shipment of biomedical waste</li> <li>- each entry is retained for 3 yr from the date the generator transports waste offsite.</li> </ul> <p>Verify that each log entry consists of all the following:</p> <ul style="list-style-type: none"> <li>- name and address of the solid waste facility where the biomedical waste is transported</li> <li>- weight of untreated and decontaminated biomedical waste transported</li> <li>- date the biomedical waste was transported</li> <li>- signature of the individual transporting the waste.</li> </ul>
<p><b>5-107.</b> Small quantity biomedical waste generators causing biomedical waste to be transported by the U.S. Postal Service must meet requirements in order to be exempt from all requirements for biomedical waste transporters, tracking biomedical waste, and recordkeeping and reporting for generators, transporters, and solid waste facilities (Regulations of Connecticut State Agencies, Section 22a-209-15(g)(3) and (i)(5)).</p>	<p>Determine if the small quantity biomedical waste generator is causing biomedical waste to be transported by the U.S. Postal Service.</p> <p>Verify that the following requirements are met for SQGs to be exempt from requirements for biomedical waste transporters, tracking biomedical waste, and recordkeeping and reporting for generators, transporters, and solid waste facilities:</p> <ul style="list-style-type: none"> <li>- the biomedical waste consists only of discarded used sharps and discarded unused hypodermic needles, scalpels, suture needs, and syringes</li> <li>- each package of such waste is sent registered mail, return receipt requested, indicating the name and address of the person to whom the waste was sent, the date when it was delivered, and the signature of the recipient</li> <li>- for each shipment, the original U.S. Postal Service receipt and the return mail receipt are retained for at least 3 yr from the date the waste is shipped</li> <li>- a log is kept with an entry for each biomedical waste shipment and each entry is maintained for at least 3 yr from the date the waste is mailed</li> <li>- each log entry includes the weight of untreated and decontaminated biomedical waste mailed, date mailed, and the name and address of the solid waste facility that the waste was mailed to.</li> </ul>
<p><b>5-108.</b> A biomedical waste transporter must include his permit number on each tracking form (Regulations of Connecticut State Agencies, Section 22a-209-15(g)(8)).</p>	<p>Verify that biomedical waste transporters include their permit numbers on each tracking form.</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<b>SOLID WASTE FACILITY CLOSINGS</b>  <b>5-109.</b> Installations planning to close solid waste facilities must meet the notification requirement (Regulations of Connecticut State Agencies, Section 22a-209-13(a)).  <b>5-110.</b> Installations closing solid waste facilities must submit certain information to the Commissioner for approval (Regulations of Connecticut State Agencies, Section 22a-209-13(b) and (c)).  <b>5-111.</b> Installations with closed solid waste or special waste disposal areas must file certain information with the municipality and the Commissioner (Regulations of Connecticut State Agencies, Section 22a-209-13(f) and (g)).	<p>Verify that the Commissioner is notified of an intent to close a solid waste facility at least 60 days before closure when there is not an order to close.</p> <p>(NOTE: The Commissioner may require action or information that he or she deems necessary to ensure the proper closing of the facility.)</p> <p>Verify that detailed information concerning use of the site following closing is submitted to the Commissioner for approval.</p> <p>Verify that the Commissioner's approval of the detailed information is obtained before any use is made of the site.</p> <p>Verify that the installation submits to the Department a complete set of as-built drawings of the area within 90 days of the closing.</p> <p>Verify that the installation records a detailed disposal area description in the appropriate municipal land records.</p> <p>Verify that the following information is sent to the Commissioner:</p> <ul style="list-style-type: none"> <li>- copy of the detailed disposal area description, certified by the municipal clerk</li> <li>- a notation of the volume and page reference of the deed to the property where the disposal area is located</li> <li>- description of the general types and locations of wastes on the site</li> <li>- depth of fill</li> <li>- depth and type of cover material</li> <li>- dates the disposal area was in use</li> <li>- area of potential impacted groundwater, as defined in the facility plan submitted with the permit to construct application</li> <li>- other information deemed necessary by the Commissioner.</li> </ul>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>5-112.</b> Installations with closed solid waste or special waste disposal areas must get Commissioner approval in order to shift responsibility for postclosure maintenance and monitoring (Regulations of Connecticut State Agencies, Section 22a-209-13(h)).</p> <p><b>RESIDUE DISPOSAL</b></p> <p><b>5-113.</b> Installations with solid waste disposal areas that plan to accept residue for disposal must meet requirements (Regulations of Connecticut State Agencies, Section 22a-209-14(a), (b)(6) and (c)).</p> <p><b>5-114.</b> Solid waste disposal areas that accept residue must utilize monocells (Regulations of Connecticut State Agencies, Section 22a-209-14(d)(1)).</p> <p><b>5-115.</b> No solid waste other than residue must be deposited in or above the actual limit of the residue monocell in disposal areas that accept residue (Regulations of Connecticut State Agencies, Section 22a-209-14(d)(2)).</p>	<p>Verify that installations wanting to transfer responsibility for postclosure maintenance and monitoring of closed waste disposal areas get the Commissioner approval.</p> <p>Verify that only solid waste disposal areas meeting all the following conditions are used to dispose of residue:</p> <ul style="list-style-type: none"> <li>- having a permit to discharge leachate, or where the disposal area is in compliance with an order issued under Chapter 446K of the General Statutes</li> <li>- having a permit that specifically authorizes the disposal of residue, issued either before or after February 1990.</li> <li>- where groundwater, including water at the zone of influence, is classified GC by water quality standards.</li> </ul> <p>(NOTE: Applications for permits to construct and operate solid waste disposal areas for the disposal of residue may propose alternate technologies or ask the Commissioner for an amendment of the pertinent groundwater classification if the groundwater is not GC.)</p> <p>Verify that residue is disposed of in monocells.</p> <p>Verify that the number of monocells at a disposal area is adequate for the size and configuration of the disposal area.</p> <p>Verify that enough monocells are equipped with pan lysimeters or similar devices to allow a reliable determination of the quantity and quality of leachate generated by the residue at the disposal area.</p> <p>Verify that no solid waste other than residue is deposited in or above the actual limit of a monocell where residue has been placed.</p> <p>(NOTE: The Commissioner may allow deposit of solid waste other than residue in or above the actual limit of the residue monocell under certain conditions.)</p>

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<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>5-116.</b> Solid waste disposal areas accepting residue must meet groundwater monitoring requirements (Regulations of Connecticut State Agencies, Section 22a-209-14(d)(3)).</p>	<p>Verify that the groundwater monitoring requirements of Regulations of Connecticut State Agencies, Section 22a-430-4(C)(20)(e) of the Regulations of Connecticut State Agencies are met, including monitoring of dioxin in groundwater.</p>
<p><b>5-117.</b> Installations with closed solid waste disposal areas that accepted residue must meet additional postclosure requirements when ordered to by the Commissioner (Regulations of Connecticut State Agencies, Section 22a-209-14(e)(7)).</p>	<p>(NOTE: In addition to the postclosure monitoring and maintenance period required by a permit for a disposal area accepting residue, the Commissioner may require the installation to do additional inspection, monitoring, and maintenance of the closed disposal area.)</p> <p>Verify that the installation being considered by the Commissioner for additional inspection, monitoring, and maintenance beyond what is required in its permit publishes a notice of a hearing on the issue at least 30 days before the hearing.</p>
<p><b>5-118.</b> Installations that manage or transport residue must meet dewatering requirements (Regulations of Connecticut State Agencies, Section 22a-209-14(f)(1)).</p>	<p>Verify that resources recovery facilities, municipal solid waste incinerators, or biomedical waste incinerators dewater residue before shipping it to a solid waste disposal area, in accordance with any Commissioner-approved plan.</p> <p>Verify that the dewatering process meets both the following conditions:</p> <ul style="list-style-type: none"> <li>- residue is dewatered to the maximum extent achievable by gravity dewatering, regardless of the dewatering process used</li> <li>- residue is dewatered to the extent necessary to prevent residue from becoming airborne.</li> </ul> <p>Verify that effluent from the dewatering of residue is discharged in accordance with a water discharge permit.</p>
<p><b>5-119.</b> Installations with solid waste disposal areas must meet transportation requirements (Regulations of Connecticut State Agencies, Section 22a-209-14(f)(2)).</p>	<p>Verify that residue is transported to the disposal area using Commissioner-approved equipment and procedures.</p> <p>Verify that the equipment is designed to prevent leakage, spillage, and dispersion of residue during transportation.</p>

<b>COMPLIANCE CATEGORY:</b> <b>Resource Conservation &amp; Recovery Act, Subtitle D (RCRA-D)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>5-120.</b> Installations with solid waste disposal areas accepting residue must meet recordkeeping requirements (Regulations of Connecticut State Agencies, Section 22a-209-14(f)(3)).</p> <p><b>LINER SYSTEMS FOR SOLID WASTE DISPOSAL AREAS ACCEPTING RESIDUE</b></p> <p><b>5-121.</b> Installations with solid waste disposal areas accepting residue must have liner systems (Regulations of Connecticut State Agencies, Section 22a-209-14(g)(1)).</p> <p><b>5-122.</b> Installations with solid waste disposal areas accepting residue must not begin work on a liner system without permits (Regulations of Connecticut State Agencies, Section 22a-209-14(g)(4)).</p> <p><b>5-123.</b> Installations with solid waste disposal areas accepting residue must meet design and operation requirements (Regulations of Connecticut State Agencies, Section 22a-209-14(h) and (i)).</p>	<p>Verify that records are kept at the disposal area about the weight, origin, and location of the cell used for disposal of each load of residue received at the disposal area.</p> <p>Verify that the installation submits to the Commissioner on 1 January, 1 April, 1 July, and 1 October a summary of information in all the records generated during the preceding 3 mo.</p> <p>Verify that any solid waste disposal area accepting residue has a liner system that includes a leachate treatment and discharge system.</p> <p>Verify that the liner system consists of all the following:</p> <ul style="list-style-type: none"> <li>- protective cover</li> <li>- leachate collection system</li> <li>- primary liner</li> <li>- leachate leak detection zone</li> <li>- secondary liner</li> <li>- subbase.</li> </ul> <p>(NOTE: Some disposal areas may not be required to have liner systems or meet liner system requirements.)</p> <p>Verify that no site preparation or construction for a liner system begins before a permit to construct is obtained.</p> <p>Verify that the disposal area is designed to minimize stormwater infiltration into the soil and leachate production.</p> <p>Verify that the disposal area is designed and operated to provide for the final cover, grading, and stabilization.</p>



<b>COMPLIANCE CATEGORY:</b> <b>Resource Conservation &amp; Recovery Act, Subtitle D (RCRA-D)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>5-124.</b> Installations with solid waste disposal areas accepting residue must meet requirements for protecting the liner (Regulations of Connecticut State Agencies, Section 22a-209-14(j)).</p>	<p>Verify that any means are used (including inspection of disposed material) to ensure that no residue deposited in a cell contains material capable of penetrating or puncturing the liner.</p>
<p><b>5-125.</b> Installations with solid waste disposal areas accepting residue must meet requirements for discharging leachate (Regulations of Connecticut State Agencies, Section 22a-209-14(k)).</p>	<p>Verify that the installations discharging leachate from leachate collection or leachate treatment systems have water discharge permits and meet all permit conditions.</p>
<p><b>RECYCLING</b></p>	
<p><b>5-126.</b> Installations within certain municipalities must meet recycling requirements (Regulations of Connecticut State Agencies, Section 22a-241b-2).</p>	<p>Verify that the following items are recycled within each municipality within 3 mo of availability of service by a regional or local processing system:</p> <ul style="list-style-type: none"> <li>- cardboard</li> <li>- glass food containers</li> <li>- leaves</li> <li>- metal food containers</li> <li>- newspaper</li> <li>- office paper</li> <li>- scrap metal</li> <li>- storage batteries</li> <li>- waste oil.</li> </ul> <p>(NOTE: The Commissioner may determine that one or more of the above-mentioned items should be landfilled or incinerated during a certain time period. An aggrieved party or parties can request a hearing on any such proposal by the Commissioner, and the Commissioner's final decision can be appealed.)</p>

<b>INSTALLATION:</b>	<b>COMPLIANCE CATEGORY:</b> Resource Conservation & Recovery Act Subtitle D (RCRA-D) Connecticut Supplement	<b>DATE:</b>	<b>REVIEWER(S):</b>
<b>STATUS</b> NA   C   RMA	<b>REVIEWER COMMENTS:</b>		

**SECTION 6**

**RESOURCE CONSERVATION AND RECOVERY ACT,**

**SUBTITLE I (RCRA-I)**

**Connecticut Supplement**

**SECTION 6**  
**RESOURCE CONSERVATION AND**  
**RECOVERY ACT, SUBTITLE I (RCRA-I)**  
**Connecticut Supplement**

**Definitions**

These definitions cover underground storage tank (UST) system requirements for the state of Connecticut that are taken from Section 22a-449(d)-1 of the Regulations of Connecticut State Agencies, *Control of the Nonresidential Underground Storage and Handling of Oil and Petroleum Liquids*. These regulations are in addition to Federal requirements.

- *Abandoned* - rendered permanently unfit for use.
- *Abnormal Loss or Gain* - an apparent loss or gain in liquid exceeding 0.5 percent of:
  1. the volume of product used or sold by the installation during any seven consecutive day period
  2. the volumetric capacity of the tank or container (whichever is greater) as determined by reconciliation of inventory measurements made in accordance with subsection (g) of these regulations.
- *Discharge* - the emission of any water, substance, or material into the waters of the state, whether or not such substance causes pollution.
- *Existing Facility* - the construction or installation began on the facility prior to the effective date of these regulations.
- *Facility* - a system of interconnected tanks, pipes, pumps, vaults, fixed containers, and appurtenant structures (singly or in any combination) that are used or designed to be used for the storage, transmission, or dispensing of oil or petroleum liquids, including any monitoring devices. As used in these regulations, the term facility refers only to nonresidential underground facilities.
- *Failure* - a condition that can or does allow the uncontrolled passage of liquid in or out of a facility, and includes but is not limited to a discharge to the waters of the state without a permit.
- *Failure Determination* - the evaluation of a facility component in accordance with subsection (i) of these regulations to determine whether a failure has occurred.
- *Life Expectancy* - the period of time within which a failure is not expected to occur as determined in accordance with subsection (h) of these regulations.
- *Life Expectancy Determination* - the evaluation of a facility component in accordance with subsection (h) of these regulations to determine its life expectancy.
- *Liquid* - any liquid, including, but not limited to, oil and petroleum liquids.

- **Listed** - included in a list published by a testing laboratory that:
  1. is approved by the Commissioner of Environmental Protection in consultation with the Bureau of the State Fire Marshall
  2. maintains periodic inspection of production of listed equipment or materials
  3. states in their listing either that the equipment, material, or procedure meets appropriate standards or has been tested and found suitable for use in a specified manner.
- **New Facility** - a facility where construction or installation begins after the effective date of these regulations, including, but not limited to, facilities that replace existing facilities and facilities that are moved from one location to another.
- **NFPA 30** - National Fire Protection Association publication number 30 entitled, *Flammable and Combustible Liquids Code*, as enforced by the State Fire Marshall.
- **Nonresidential** - when referring to a facility, means a facility that serves any commercial, industrial, institutional, public, or other building, including, but not limited to: hotels and motels, boarding houses, hospitals, nursing homes, and correctional institutions but not including residential buildings.
- **Oil or Petroleum Liquid or Product** - oil or petroleum of any kind in liquid form including, but not limited to, waste oils and distillation products such as fuel oil, kerosene, naphtha, gasoline, and benzene.
- **Operator** - the person in possession of or having responsibility for the daily operation of a facility.
- **Residential Building** - any house, apartment, trailer, mobile home, or other structure occupied by individuals as a dwelling.
- **Substantial Modification** - the construction or installation of any addition to a facility or any restoration or renovation of a facility that: increases or decreases the onsite storage capacity of the facility, significantly alters the physical configuration of the facility, or impairs or improves the physical integrity of the facility or its monitoring systems. Substantial modification shall not include a modification for the purpose of extending life expectancy in accordance with subparagraph (h)(2)(D) of these regulations.
- **Temporarily Out-of-Service** - not in use, in that no regular filling or drawing is occurring; or not established and maintained in accordance with these regulations; or not regularly attended and secured.
- **Underground** - when used referring to a facility or facility component, this means that 10 percent or more of the volumetric capacity of the facility or component is below the ground surface and the portion that is below the surface is not fully visible for inspection.

**RESOURCE CONSERVATION AND RECOVERY ACT, SUBTITLE I (RCRA-I)**  
**GUIDANCE FOR CONNECTICUT CHECKLIST USERS**

<b>Applicability:</b>	<b>Refer to Checklist Items:</b>
Exemptions	6-1
Records	6-2 through 6-4
Design, Construction, Installation, and Maintenance	6-5 and 6-6
Operation	6-7
Reporting	6-8
Failure Determination	6-9
Failures	6-10
Abandoned and Temporarily Out-of-Service USTs	6-11

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**COMPLIANCE CATEGORY:**  
**Resource Conservation & Recovery Act, Subtitle I (RCRA-I)**  
**Connecticut Supplement**

**REGULATORY  
REQUIREMENTS:**

**REVIEWER CHECKS:**

## EXEMPTIONS

**6-1.** Exempt and partially exempt USTs must meet specific requirements (Regulations of Connecticut State Agencies, Section 22a-449(d)-1(c).

(NOTE: USTs that are used solely for the storage, transmitting, or dispensing of viscous oil or petroleum liquid that will not flow at temperatures below 60 °F are exempt from the requirements of these regulations.)

**Determine if the installation has any of the following partially exempt USTs:**

- the nominal capacity exclusive of piping is less than 2100 gal
- the sole intended use of the oil or petroleum liquid is for onsite heating or intermittent stationary power production such as stand-by electricity generation or irrigation pump power
- the oil or petroleum liquid stored is not intended for resale
- the UST is not used for the storage or handling of waste oil.

## RECORDS

**6-2.** Records must be kept for all USTs except partially exempt facilities (Regulations of Connecticut State Agencies, Section 22a-449(d)-1(c) and (g)(1)).

Verify that up-to-date records are maintained for the following:

- significant construction and installation
- monitoring
- substantial modifications
- abandonment, removal, or replacement of underground components or protective devices for these components.

Verify that the operator reviews these records and attests to their accuracy by signing them no later than 7 days following completion of the recorded activity.

**6-3.** Daily inventory records must be kept for UST systems (Regulations of Connecticut State Agencies, Section 22a-449(d)-1(g)(2)(A) through (D) and (g)(3)).

(NOTE: Facilities used solely for onsite heating, process steam generation, other onsite combustion or manufacturing processes, or waste oil storage are exempt from the daily inventory record requirements.)

- the amount of product used and received

- the level of water and product in the tank or container.
- Verify that a reconciliation comparing the amount of product used and

Verify that a reconciliation comparing the amount of product used and received and the level of water and product in the tank is made weekly to determine if abnormal loss or gain has occurred.

Verify that the operator reviews these records and attests to their accuracy.

Verify that the operator reviews these records and attests to their accuracy by signing them no later than 7 days following their recording.



<b>COMPLIANCE CATEGORY:</b> <b>Resource Conservation &amp; Recovery Act, Subtitle I (RCRA-I)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<b>6-3. (continued)</b>	<p>Verify that daily inventory measurements are made by gauge or gauge stick or by readout from a listed automatic monitoring device.</p> <p>Verify that these measuring devices are calibrated in accordance with the manufacturer's specifications and recommendations.</p> <p>Verify that all required records are kept on the premises of the UST for at least 5 yr and are available for immediate inspection by the Commissioner or his or her representative during reasonable hours.</p> <p>(NOTE: Daily inventory measurements do not need to be recorded on those days when a UST is not in operation; however, if this period exceeds 15 consecutive days, inventory measurements must be recorded on every 15th day. A day when product is delivered is considered a day of operation.)</p>
<b>6-4.</b> Specific actions are required when the inventory reconciliation indicates an abnormal loss or gain in product (Regulations of Connecticut State Agencies, Section 22a-449(d)-1(g)(2)(E) and (F)).	<p>Determine if inventory reconciliation indicates an abnormal loss or gain that is not explainable by spillage, temperature variations or other known causes.</p> <p>Verify that an immediate investigation and correction of the source of any abnormal loss or gain is conducted.</p> <p>Verify that as many of the following steps as necessary to confirm an abnormal loss or gain are taken:</p> <ul style="list-style-type: none"> <li>- if an inventory record error is not apparent, a recalculation to determine abnormal loss or gain is made starting from a point where the records indicate no abnormal loss or gain</li> <li>- a detailed visual inspection of those components of the UST that are readily accessible for evidence of failure</li> <li>- a calibration of the dispensers of the particular oil or petroleum liquid in question</li> <li>- a failure determination on the piping system between the storage tank or container and dispenser(s) in accordance with the protocol section FAILURE DETERMINATION</li> <li>- a failure determination on the tank or container in accordance with the protocol section FAILURE DETERMINATION.</li> </ul> <p>Verify that when an abnormal loss or gain is confirmed, the abnormal loss or gain is immediately reported to the State Police.</p>

<b>COMPLIANCE CATEGORY:</b> <b>Resource Conservation &amp; Recovery Act, Subtitle I (RCRA-I)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>DESIGN, CONSTRUCTION, INSTALLATION AND MAINTENANCE</b></p> <p><b>6-5.</b> All new UST systems and new components of substantially modified UST systems must meet specific standards (Regulations of Connecticut State Agencies, Section 22a-449(d)-1(e)).</p>	<p>Verify that each tank or container meets one of the following requirements:</p> <ul style="list-style-type: none"> <li>- is a listed fiberglass-reinforced plastic tank, is equipped with contact plates under all fill and gauge openings, and is compatible with the contained oil or petroleum liquid as determined by the tank or container manufacturer's warranty</li> <li>- is a listed steel tank externally coated with a factory applied corrosion-resistant coating approved by the manufacturer for the proposed use, is equipped with cathodic protection and permanent cathodic protection monitoring devices, and has contact plates under all fill and gauge openings.</li> </ul> <p>Verify that all underground components meet the following requirements:</p> <ul style="list-style-type: none"> <li>- are protected against corrosion by use of noncorrosive materials or steel components with factory applied corrosion-resistant coating, cathodic protection, and permanent cathodic protection monitoring devices</li> <li>- are designed, constructed, and installed to allow failure determination of all underground piping without the need for substantial excavation</li> <li>- are chemically compatible with the contained oil or petroleum liquid as determined by the manufacturer's warranty.</li> </ul> <p>Verify that the installation and maintenance of underground components of new USTs and the substantial modification of underground components of new or existing USTs are done in accordance with NFPA 30 and the manufacturer's specifications and recommendations.</p> <p>Verify that the most stringent and protective requirements are used if the requirements of NFPA 30 are inconsistent with the manufacturer's specifications or recommendations.</p> <p>Verify that the installation submits a statement, signed by the installation contractor, certifying that the installation has been carried out in accordance with Regulation 22a-449(d)-1(e), <i>Control of the Nonresidential Underground Storage and Handling of Oil and Petroleum Liquids</i>, to the Commissioner within 30 days after the completion of installation.</p> <p>Verify that all cathodic protection monitoring devices and cathodic protection systems for underground components meet the specifications of the manufacturer of the component(s) being protected.</p>

<b>COMPLIANCE CATEGORY:</b> <b>Resource Conservation &amp; Recovery Act, Subtitle I (RCRA-I)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<b>6-5. (continued)</b>	<p>Verify that the cathodic protection monitoring devices and cathodic protection systems are installed and maintained in accordance with the specifications and recommendations of the manufacturer(s) of the monitoring device, the cathodic protection system, and the underground component being protected, as applicable.</p> <p>Verify that the most stringent and protective requirement is followed if the manufacturer's specifications or recommendations are inconsistent.</p> <p>Verify that no installations with existing USTs use or operate any underground component of that UST for longer than 5 yr beyond its life expectancy unless the component is modified to comply with the standards for new USTs.</p> <p>Verify that components that are not modified are removed or abandoned in accordance with NFPA 30.</p> <p>Verify that no component is moved without the prior written approval of the Commissioner.</p>
<b>6-6.</b> All cathodic protection systems that protect UST components must meet structure to soil test voltage requirements (Regulations of Connecticut State Agencies, Section 22a-449(d)-1(e)(1)(E)).	<p>Verify that all cathodic protection systems that protect UST components are tested annually.</p> <p>Verify that a structure to soil test voltage reading of at least -0.85 volts (V) measured between the structure and a copper-copper sulfate electrode is maintained.</p> <p>Verify that voltage drops, other than those across the structure electrolyte boundary, are considered for valid interpretation of voltage measurements.</p> <p>Verify that impressed current cathodic protection systems are checked monthly to assure that the system rectifier providing the source of the current is operating properly.</p> <p>Verify that a monthly record of rectifier current is maintained.</p> <p>Verify that any cathodic protection system malfunction or failure to meet structure to soil test voltage requirements is repaired as quickly as possible, but no later than 30 days from the date of the malfunction discovery.</p> <p>Verify that anodes are replaced when all other corrective measures taken are not sufficient to maintain the structure to soil test voltage of at least 0.85 V.</p> <p>Verify that other cathodic protection criteria are used only with written approval of the Commissioner.</p>

<b>COMPLIANCE CATEGORY:</b> <b>Resource Conservation &amp; Recovery Act, Subtitle I (RCRA-I)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>OPERATION</b></p> <p><b>6-7.</b> USTs must be operated according to specific requirements (Regulations of Connecticut State Agencies, Section 22a-449(d)-1(b) and (f)).</p>	<p>Verify that all USTs that discharge any water, substance, or material, including oil or petroleum liquid, from any UST system to the waters of the state have a state permit.</p> <p>Verify that if the ownership, possession, or control of a new or existing UST system is transferred, compliance with Regulation 22a-449(d)-1(e), <i>Control of the Nonresidential Underground Storage and Handling of Oil and Petroleum Liquids</i>, is fully disclosed to the transferee at least 15 days before the transfer, including an up-to-date copy of the information submitted to the Commissioner.</p>
<p><b>REPORTING</b></p> <p><b>6-8.</b> USTs must meet specific reporting requirements (Regulations of Connecticut State Agencies, Section 22a-449(d)-1(c), (d)(2) and (3), and (5) through (7)).</p>	<p>Verify that within 30 days following the completion of the installation of a new UST, the operator notifies the Commissioner and the office of the local fire marshal of the results of the required life expectancy determination.</p> <p>Verify that the required notification includes:</p> <ul style="list-style-type: none"> <li>- the location and capacity</li> <li>- the date of installation</li> <li>- the contents</li> <li>- the type of UST</li> <li>- the type of monitoring systems, if any</li> <li>- the results of life expectancy determinations.</li> </ul> <p>Verify that any change in the provided information is reported within 30 days.</p>

<b>COMPLIANCE CATEGORY:</b> <b>Resource Conservation &amp; Recovery Act, Subtitle I (RCRA-I)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>FAILURE DETERMINATION</b></p> <p><b>6-9.</b> Failure determination tests for all USTs except partially exempt facilities must meet certain specifications (Regulations of Connecticut State Agencies, Section 22a-449(d)-1(c) and (i)).</p>	<p>Verify that failure determinations consist of any test that considers the temperature coefficient of expansion of the product being tested as related to any temperature change during the test, and is capable of detecting a loss of 0.05 gal/h.</p> <p>Verify that failure determinations are conducted for all underground components of new and existing USTs as follows:</p> <ul style="list-style-type: none"> <li>- on all fiberglass-reinforced plastic components within 3 to 6 mo after their installation, within 21 to 24 mo after installing, and within 9 to 12 mo before the end of their life expectancy</li> <li>- on all cathodically protected components within 21 to 24 mo and within 9 to 12 mo before the end of their life expectancy</li> <li>- beginning 3 yr following the effective date of these regulations on all existing UST components that are not in compliance with the standards for new USTs and new components of substantially modified USTs in the protocol section DESIGN, CONSTRUCTION, INSTALLATION, and MAINTENANCE within 33 to 36 mo before the end of their life expectancy and annually thereafter.</li> </ul> <p>(NOTE: Alternative methods and schedules for failure determination may be used with the prior written approval of the Commissioner.)</p>
<p><b>FAILURES</b></p> <p><b>6-10.</b> UST failures must meet specific management requirements (Regulations of Connecticut State Agencies, Section 22a-449(d)-1(j)).</p>	<p>Verify that all failures are reported to the State Police immediately.</p> <p>Verify that a failed UST component is immediately emptied and is no longer used and that one of the following requirements is met:</p> <ul style="list-style-type: none"> <li>- removed or abandoned within 90 days in accordance with procedures specified in NFPA 30</li> <li>- repaired within 60 days</li> <li>- has all damaged components replaced in accordance with the standards for new UST and new components of substantially modified UST in the protocol section DESIGN, CONSTRUCTION, INSTALLATION, and MAINTENANCE.</li> </ul> <p>Verify that any UST discharging oil or petroleum liquids without a permit immediately meets the following requirements:</p> <ul style="list-style-type: none"> <li>- stops discharging</li> <li>- reclaims, recovers, and properly disposes of the discharged liquid and any other substance contaminated by it</li> </ul>

**COMPLIANCE CATEGORY:**  
**Resource Conservation & Recovery Act, Subtitle I (RCRA-I)**  
**Connecticut Supplement**

**REGULATORY  
REQUIREMENTS:**

## REVIEWER CHECKS:

**6-10. (continued)**

- restores the environment to a condition and quality acceptable to the Commissioner
  - repairs damage caused by the discharge.
- Verify that when a failure occurs at a new or existing UST, all of the components are evaluated within 30 days to determine if conditions similar to those which caused the failure exist.
- Verify that within 10 days following the evaluation, the operator notifies the Commissioner in writing of the methods and results of each evaluation.

Verify that if an additional failure is detected, the operator treats it in accordance with the protocol section **FAILURES**.

Verify that when a new or existing UST is abandoned or rendered temporarily out-of-service, the Commissioner is notified in writing within 30 days.

Verify that USTs and UST components are abandoned in accordance with

## ABANDONED AND TEMPORARILY OUT-OF-SERVICE USTs

**6-11.** Abandoned and temporarily out-of-service USTs must be properly treated (Regulations of Connecticut State Agencies, Section 22a-449(d)-1(k)).

Verify that when a new or existing UST is abandoned or rendered temporarily out-of-service, the Commissioner is notified in writing within 30 days.

Verify that USTs and UST components are abandoned in accordance with

Verify that no installation uses or operates a temporarily out-of-service

UST without giving prior written notice to the Commissioner that the UST will be used or operated.



<b>INSTALLATION:</b>	<b>COMPLIANCE CATEGORY:</b> Resource Conservation & Recovery Act Subtitle I (RCRA-I) Connecticut Supplement	<b>DATE:</b>	<b>REVIEWER(S):</b>
<b>STATUS</b> NA   C   RMA	<b>REVIEWER COMMENTS:</b>		



## **SECTION 7**

**COMPREHENSIVE ENVIRONMENTAL RESPONSE**

**COMPENSATION AND LIABILITY ACT/**

**SUPERFUND AMENDMENT AND REAUTHORIZATION ACT (CERCLA/SARA)**

**Connecticut Supplement**

**SECTION 7**  
**COMPREHENSIVE ENVIRONMENTAL RESPONSE**  
**COMPENSATION AND LIABILITY ACT/SUPERFUND**  
**AMENDMENT AND REAUTHORIZATION ACT (CERCLA/SARA)**  
**Connecticut Supplement**

Regulations promulgated under the authority of CERCLA/SARA are applicable to installations in Connecticut. Connecticut regulations cited under several protocols require release reporting. Refer to Protocol 7 in the U.S. Environmental Compliance Assessment System (ECAS) Manual for Federal, Army, and DOD requirements.



<b>INSTALLATION:</b>	<b>COMPLIANCE CATEGORY:</b> Comprehensive Environmental Response Compensation and Liability Act / Superfund Amendment and Reauthorization Act (CERCLA/SARA) Connecticut Supplement	<b>DATE:</b>	<b>REVIEWER(S):</b>
<b>STATUS</b> NA   C   RMA	<b>REVIEWER COMMENTS:</b>		

**SECTION 8**

**TOXIC SUBSTANCES CONTROL ACT (TSCA)**

**Connecticut Supplement**

**SECTION 8**  
**TOXIC SUBSTANCES CONTROL ACT (TSCA)**  
**Connecticut Supplement**

Regulations promulgated under the authority of TSCA are applicable to Federal installations in Connecticut. The disposal of polychlorinated biphenyl (PCB) and PCB-contaminated materials or materials containing PCB are regulated by the state. See this protocol and U.S. ECAS Manual for Federal, Army, and DOD requirements.



**TOXIC SUBSTANCES CONTROL ACT (TSCA)**  
**GUIDANCE FOR CONNECTICUT CHECKLIST USERS**

**Applicability:** **Refer to**  
**Checklist Items:**

PCB Disposal    8-1

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**COMPLIANCE CATEGORY:**  
**TOXIC SUBSTANCES CONTROL ACT (TSCA)**  
**Connecticut Supplement**

<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>PCB DISPOSAL</b></p> <p><b>8-1.</b> All disposal of PCB or any item, product or material containing PCB must be an approved means or permit (General Statutes of Connecticut, 22a-467).</p>	<p>Verify that all disposal of PCB is state approved or permitted.</p>



<b>INSTALLATION:</b>	<b>COMPLIANCE CATEGORY:</b> <b>TOXIC SUBSTANCES CONTROL ACT (TSCA)</b> Connecticut Supplement	<b>DATE:</b>	<b>REVIEWER(S):</b>
<b>STATUS</b> NA   C   RMA	<b>REVIEWER COMMENTS:</b>		

## **SECTION 9**

**FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT (FIFRA)**

**Connecticut Supplement**

# SECTION 9

## FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT (FIFRA)

### Connecticut Supplement

The following definitions are taken from the Connecticut General Statutes (CGS), Chapter 441, Sections 22a-47, and 22a-66a-1.

#### Definitions

- *Animal* - all vertebrate and invertebrate species, including man and other mammals, birds, fish, and shellfish.
- *Certified Applicator* - any individual who is certified by the Pesticide and PCB Management Division of the Bureau of Waste Materials Management of the Department of Environmental Protection of the State of Connecticut.
- *Commercial Applicator* - any individual who uses or supervises the use of any restricted-use pesticides or any pesticide on property not owned or rented by the individual(s) or the employer.
- *Commissioner* - the Commissioner of Environmental Protection of the State of Connecticut.
- *Defoliant* - any substance or mixture of substances intended for causing the leaves or foliage to drop from a plant, with or without causing abscission.
- *Desiccant* - any substance or mixture of substances intended for artificially accelerating the drying of plant tissue.
- *Device* - any instrument or contrivance that uses pesticides and is intended for trapping, destroying, repelling, or mitigating any pest or any other form of plant or animal life but not including equipment used for the application of pesticides when sold separately.
- *Environment* - includes the ecosystem of water, air, land, plants, man, and other animals, and the interrelationships that exist among these.
- *Fenced Area* - an area that is completely enclosed by a fence, wall, or other natural or artificial barrier that prevents unauthorized entry.
- *FIFRA* - the Federal Insecticide, Fungicide, and Rodenticide Act.
- *Label* - the written, printed, or graphic matter on or attached to, the pesticide or device or any of its containers or wrappers.
- *Labeling* - all labels and all other written, printed, or graphic matter accompanying the pesticide or device or to which reference is made on the label or in literature accompanying the pesticide or device.

- *Nematode* - invertebrate animals of the phylum Nemathelminthes and class Nematoda; that is, unsegmented round worms with elongated, fusiform, or sac-like bodies covered with cuticle and inhabiting soil, water, plants, or plant parts (may also be called nemas or eelworms).
- *Person* - any individual, partnership, association, corporation, government entity, or any organized group of persons whether incorporated or not.
- *Pest* - any insect, rodent, nematode, fungus, weed, or any other form of terrestrial or aquatic plant or animal life or virus, or bacteria, on or in living man or other living animals, that the Commissioner declares to be a pest that is injurious to health or the environment.
- *Pesticide* - any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest; any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant.
- *Plant Regulator* - any substance or mixture of substances intended, through physiological action, for accelerating or retarding the rate of growth or rate of maturation, or for otherwise altering the behavior of plants or their produce; does not include substances intended as plant nutrients, trace elements, nutritional chemicals, plant inoculants, and soil amendments that are not for pest destruction and are nontoxic nonpoisonous in the undiluted packaged concentration.
- *Point of Entry* - each location that is designed or generally used for entry onto the property by pedestrians or motor vehicles.
- *Restricted-Use Pesticide* - any pesticide or pesticide use classified as restricted by the Administrator of the U.S. Environmental Protection Agency (USEPA) or by the Commissioner.
- *Weed* - any plant that grows where not wanted.

**FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT (FIFRA)**  
**GUIDANCE FOR CONNECTICUT CHECKLIST USERS**

<b>Applicability:</b>	<b>Refer to Checklist Items:</b>
Certification	9-1
Records	9-2
Pesticide Use	9-3 and 9-4
Pesticides in State Waters	9-5
Outdoor Signage	9-6
Golf Course Signage	9-7
Restricted Pesticides	9-8 and 9-9
Sodium Flouroacetate	9-10 through 9-12

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COMPLIANCE CATEGORY: Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Connecticut Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS:
<b>CERTIFICATION</b>	
<b>9-1.</b> Installation personnel who apply USEPA or state restricted-use pesticides must meet certification requirements (CGS, Chapter 441, Section 22a-54(a), 22a-66-5(h) 1-2).	<p>Verify that all personnel who supervise the use of any restricted-use pesticide hold a commercial certificate or permit.</p> <p>(NOTE: See Appendix 9-1 for a list of state restricted-use pesticides.)</p> <p>Verify that all personnel who use any restricted-use pesticide hold a commercial certificate or permit or are under the direct supervision of a certified applicator.</p> <p>Verify that all personnel who use a USEPA restricted-use pesticide are certified applicators or are under the direct supervision of a certified applicator.</p> <p>Verify that personnel who apply, mix, or handle pesticides or come in contact with pesticide drift for more than brief periods are certified.</p> <p>Verify that all personnel who apply any pesticide or fertilizer by aircraft hold a certificate and a permit.</p>
<b>RECORDS</b>	
<b>9-2.</b> Commercial applicators must maintain pesticide application records (CGS 22a-58(d)).	<p>Verify that commercial applicators maintain records of their use and supervision of pesticide use, including the following:</p> <ul style="list-style-type: none"> <li>- the name and certification number of the commercial supervisor and the commercial operator</li> <li>- the kind and amount of pesticide used</li> <li>- the date and place of application</li> <li>- the target pest</li> <li>- the crop or site treated.</li> </ul> <p>Verify that a summary of the name and certification number of the commercial supervisor and the commercial operator, and the kind and amount of pesticide used is submitted to the Commissioner by 31 January of each year.</p>
<b>PESTICIDE USE</b>	
<b>9-3.</b> Pesticide use must meet safe management standards (CGS 22a-61(a)(1), (b)(1), (f)(1)(A), (D),(E), and 22a-66-3(a)).	<p>Verify that personnel do not:</p> <ul style="list-style-type: none"> <li>- detach, alter, deface, or destroy any labeling required under FIFRA</li> <li>- use a pesticide in a manner inconsistent with the registered labeling or with state or Federal restrictions</li> <li>- operate faulty or unsafe equipment</li> <li>- apply a pesticide in a faulty, careless, or negligent manner.</li> </ul>

<b>COMPLIANCE CATEGORY:</b> <b>Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>9-4.</b> Pesticide use must meet requirements to prevent water contamination (CGS 22a-66-3(a)).</p>	<p>Verify that all hoses used to draw water from a water supply have an anti-siphoning device if a reversal of flow would cause any pesticide to enter into the hose.</p> <p>Verify that the discharge side of a pump is not connected to any water system.</p> <p>Verify that all filler hoses used as the intake in drawing water from water courses are covered except when in use, to prevent pesticide contamination.</p> <p>Verify that no water to be used in pesticide applications is drawn from any stream or pond leading to a potable water supply reservoir.</p>
<p><b>PESTICIDES IN STATE WATERS</b></p> <p><b>9-5.</b> The use of pesticides in waters of the state requires a permit (CGS 22a-66z-1(a)).</p>	<p>Verify that personnel who introduce any chemical into the waters of the state for control of aquatic vegetation, fish populations, or other aquatic organisms have a permit from the Commissioner of Environmental Protection.</p>
<p><b>OUTDOOR SIGNAGE</b></p> <p><b>9-6.</b> Outdoor pesticide application requires specific signage (CGS 22a-66a(c),(f), and 22a-66a-1(d)).</p>	<p>Verify that personnel making an outdoor application of a pesticide within 100 yd of any property line post a sign at the time of application notifying the public of the application at any conspicuous point of entry.</p> <p>Verify that commercial pesticide applicators post signs every 150 ft of road frontage of treated property notifying the public of pesticide application.</p> <p>(NOTE: These requirements do not apply to noncommercial applications to an area less than 100 ft<sup>2</sup> or to a fenced area, or to applications on land that produce agricultural commodities from which gross sales in excess of \$1000 were realized or can reasonably be expected to be realized during any calendar year.)</p> <p>Verify that signs are posted at the time of the pesticide application.</p> <p>Verify that the signs:</p> <ul style="list-style-type: none"> <li>- are at least 4 in. high by 5 in. wide</li> <li>- are on rigid material substantial enough to be easily read for at least 24 h after the pesticide application despite adverse weather conditions</li> <li>- conform to published standards.</li> </ul>

<b>COMPLIANCE CATEGORY:</b> <b>Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>9-6. (continued)</b></p>	<p>Verify that signs posted along road frontage face the road, and signs posted at a point of entry face the direction of persons as they enter the property.</p> <p>Verify that the bottom of each sign is at least 12 in. above the ground and the top is no higher than 48 in. above the ground.</p> <p>(NOTE: Signs must be posted at the property boundary between 2 and 5 ft from the sidewalk, or, if there is no sidewalk, between 2 and 5 ft from the road. If there is also no road, signs must be posted between 2 and 5 ft from the property boundary.)</p> <p>Verify that when landscaping or other conditions make a sign inconspicuous or difficult to read if the sign were posted within the previously mentioned specifications, the sign must be posted in a similar manner so that it is conspicuous and easily read by any adult or child entering or passing the property on foot.</p> <p>Verify that no person removes or renders difficult to read any posted pesticide application sign within 24 h after the pesticide application that it marks.</p>
<p><b>GOLF COURSE SIGNAGE</b></p> <p><b>9-7.</b> Pesticide application to golf courses requires specific signage (CGS 22a-66a(d), and (f), and 22a-66a-1(d)).</p>	<p>Verify that personnel applying pesticides to a golf course first post a sign not more than 24 h before applying pesticides.</p> <p>Verify that signs are posted at conspicuous places at the point of registration in the clubhouse and at the first tee notifying the public of the application.</p> <p>Verify that golf courses with more than 9 holes have signs posted at the first tee of each 9 holes.</p> <p>Verify that if the location of the first tee differs for men and women, that signs are posted at both tees.</p> <p>Verify that the bottom of each sign is at least 40 in. above the ground and the top of the sign is not more than 60 in. above the ground.</p> <p>Verify that no person removes or renders difficult to read within 24 h after the pesticide application any information that is required to be posted.</p> <p>Verify that signs meet the following requirements:</p> <ul style="list-style-type: none"> <li>- are at least 12 in. high by 12 in. wide</li> <li>- are of rigid material substantial enough to be easily read for at least 24 h after the pesticide application despite adverse weather conditions</li> </ul>

**COMPLIANCE CATEGORY:**  
**Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)**  
**Connecticut Supplement**

**REGULATORY  
REQUIREMENTS:**

**REVIEWER CHECKS:**

**9-7. (continued)**

- contain the statement **PESTICIDE APPLICATION WITHIN LAST 24 HOURS** in bold letters at least 1 in. high
- contain the statement, "Contact \_\_\_\_\_ for more information" in letters at least three-quarters of an inch high.

(NOTE: The (blank) space must contain the name or names of the person at the golf course to contact for more information on the pesticide application.)

Verify that each sign specifies in letters at least one-half inch high, the tees, greens, fairways, and other areas on the golf course to which pesticides have been applied within the preceding 24 h or will soon be applied.

## RESTRICTED PESTICIDES

**9-8. Specific pesticides are prohibited in Connecticut (CGS 22a-66-2(a)).**

Verify that personnel do not apply any of the pesticides listed in Appendix 9-2.

**9-9. Specific pesticides are restricted to or prohibited from specific purposes (CGS 22a-66-2(b),(c)).**

Verify that the pesticides listed in Appendix 9-3 are used only where specifically authorized.

**SODIUM  
FLUOROACETATE**

**9-10. Sodium fluoroacetate management must meet specific standards (CGS 19-300t-3, 5, and 6).**

Verify that the management of sodium fluoroacetate meets the following requirements:

- sodium fluoroacetate containers are labeled as to the contents
- sodium fluoroacetate prepared solutions, baits, and equipment used in handling sodium fluoroacetate are stored in a securely locked

- place when not in use
- all keys to locked storage space are retained in the possession of a licensed, trained person or persons who are made responsible for all sodium fluoroacetate, its storage, and all operations connected with its use
- accurate inventory records are maintained of all stocks of sodium fluoroacetate and sodium fluoroacetate preparations to safeguard the material from irresponsible, untrained, or criminally inclined persons
- all weighing, measuring, and mixing equipment, stock bottles, bait containers, and other accessories involved are labeled POISON.

COMPLIANCE CATEGORY: Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) Connecticut Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS:
9-10. (continued)	<ul style="list-style-type: none"> <li>- the articles for handling sodium fluoroacetate are washed immediately after use and reserved for work with sodium fluoroacetate only</li> <li>- a respirator and rubber or plastic gloves are worn by persons handling the pure dry chemical</li> <li>- the weighing or measuring of a sodium fluoroacetate powder is done in a place reserved for that purpose which is protected from drafts (if ventilators are present, they must be closed during operations)</li> <li>- under no circumstances is sodium fluoroacetate powder to be weighed or measured out of doors or in open sheds.</li> </ul>
9-11. The application and use of sodium fluoroacetate is specially restricted (CGS 19-300t-1, 2, 4, 7, 8, 9, 11, 12, and 13).	<p>Verify that all personnel who use or have sodium fluoroacetate in their possession have specific written permission from the Commissioner for each application.</p> <p>Verify that each operator who applies sodium fluoroacetate is trained and supervised by a person registered with the Commission.</p> <p>Verify that sodium fluoroacetate is used only at military establishments and on ships, not in dwellings.</p> <p>Verify that when used for rat control purposes, sodium fluoroacetate is colored with a Nigrosine black dye.</p> <p>Verify that applicators meet the following requirements:</p> <ul style="list-style-type: none"> <li>- do not smoke or eat while working with sodium fluoroacetate</li> <li>- thoroughly wash their hands with soap and warm water and rinse them with clear water after handling, mixing, or distributing sodium fluoroacetate-poisoned baits</li> <li>- do not discard wastewater from washing upon vegetation that might be eaten by domestic animals</li> <li>- place bait out of the way of human activity.</li> </ul> <p>Verify that uncovered containers for dispensing water solutions of sodium fluoroacetate meet the following requirements:</p> <ul style="list-style-type: none"> <li>- have a capacity of not more than three-fourths of a fluid ounce and are not more than half-filled</li> <li>- have a flat base or bottom diameter at least three times its height</li> <li>- be of an off-white or other inconspicuous color</li> <li>- be marked in a strong contrasting color both inside and outside, with a distinctive standard legend containing POISON with skull and crossbones with or without the added designation 1080</li> <li>- permit no loss of liquid by penetration or seepage for a period of 3 days.</li> </ul> <p>Verify that bait boxes or bait stations are of suitable construction and size and have a feeding arrangement like a chicken feeder or watering jar or an anchored food tray.</p>

<b>COMPLIANCE CATEGORY:</b> <b>Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<b>9-11. (continued)</b>	<p>Verify that bait boxes meet the following requirements:</p> <ul style="list-style-type: none"> <li>- have a slanting top of a type to make the placing of articles upon it impossible</li> <li>- possess a means of access with no dimension greater than 2 1/2 in.</li> <li>- this means of access is never obstructed</li> <li>- are securely fastened in position and locked at all times</li> <li>- bear conspicuously the standard sodium fluoroacetate legend: POISON with skull and crossbones</li> <li>- are approved by the Commissioner of the Department of Environmental Protection.</li> </ul> <p>Verify that bait containers meet the following requirements:</p> <ul style="list-style-type: none"> <li>- are never placed above floor level</li> <li>- are placed at intervals along runways, in concealed positions behind boxes and boards, or in specially constructed bait stations at a frequency dictated by the degree of infestation.</li> </ul> <p>Verify that the bait solution meets the following requirements:</p> <ul style="list-style-type: none"> <li>- has the concentration of 12 to 14 g, but not more than one-half ounce of sodium fluoroacetate per gallon of water</li> <li>- is carried only in durable, shatter-resistant receptacles</li> <li>- is dispensed carefully by syringe or gravity-feed tubing or by the use of a pouring attachment on the sodium fluoroacetate container, to avoid spillings.</li> </ul> <p>Verify that a chart is made of the establishment and the location of each bait container marked so that it may be located and checked.</p> <p>Verify that solid baits are not used.</p> <p>Verify that operators keep detailed written records of all sodium fluoroacetate received and dispensed, including notes on the sites where baits are placed, the time of day, the date or dates, the amount and concentration of poisoned water, the number of individual placements in each room, the type of building or area treated and its sanitary condition, and a record of the person or persons responsible for handling the product.</p> <p>Verify that a chart indicating the precise location of each placement is prepared and at the close of operations every container of solution is accounted for.</p> <p>Verify that the efficiency of the operation is also recorded.</p> <p>Verify that all charts and records are kept available for inspection by the Commissioner of Environmental Protection for a period of not less than 3 calendar years from date of application.</p>

<b>COMPLIANCE CATEGORY:</b> <b>Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<b>9-11. (continued)</b>	<p>Verify that open containers that are sometimes tipped, spilled, or otherwise moved are not used in food-handling establishments.</p> <p>Verify that heavy glass caster cups or water founts are placed in covered bait boxes, instead.</p> <p>Verify that these bait boxes are placed no closer to food subject to contamination than 6 ft.</p> <p>(NOTE: This procedure may be varied only if another practiced method precludes the possible contamination of food stocks.)</p> <p>Verify that the sodium fluoroacetate solution is not used in rooms where food is mixed, baked, or otherwise formulated.</p> <p>Verify that stocks of sodium fluoroacetate (including bait solutions, while being used outside the home establishment of the operator) are not left unattended, or subject to loss or theft.</p> <p>Verify that in the event of loss or theft of any quantity of sodium fluoroacetate, the operator immediately notifies the Commissioner of the Department of Environmental Protection.</p>
<b>9-12. Items contaminated with sodium fluoroacetate must be disposed of safely (CGS 19-300t-7 and 10).</b>	<p>Verify that following poisoning operations, all combustible water containers are picked up and burned and residues of sodium fluoroacetate solutions are excessively diluted and disposed of in an area inaccessible to animals and human beings.</p> <p>Verify that paper cups and bait solutions are not reused.</p> <p>Verify that in the course of collecting bait containers or solutions for disposal following poisoning, leftovers are handled with the care used in distributing the fresh bait.</p> <p>Verify that the bodies of all poisoned rats and mice, including all dry carcasses, are recovered and destroyed by complete burning or deep burial.</p>





## Appendix 9-1

### State of Connecticut Department of Environmental Protection Restricted and Permit use Pesticides

Product	USEPA No.	Company	Type*
2,4-D Amine w/ Aquatic	35911-64-38167	Setre Chemical Co.	Aquatic
24CB	218-132	Allied Corp.	
7.5 LB Methyl Parathion	5905-414	Helena Chem. Corp.	
Aatrex 4L	100-497	Ciba-Geigy Corp.	
Aatrex 80W	100-439	Ciba-Geigy Corp.	
Aatrex 8G	100-660	Ciba-Geigy Corp.	
Aatrex Nine-0	100-585	Ciba-Geigy Corp.	
Abate 1-5G	241-174	American Cyanamid Company	Aquatic
Abate 2-CG	241-151	American Cyanamid Company	Aquatic
Abate 4E	241-132	American Cyanamid Company	Aquatic
Abate 5-CG	241-150	American Cyanamid Company	Aquatic
Access Herbicide	62719-57	Dowelanco	
Acclaim 1 EC	8340-18-54382	Hoechst-Roussel Agri-Vet	
Acrobe	62637-1-241	American Cyanamid Company	Aquatic
ADZ-Life	3008-13	Osmose Wood Pres. Co.	
ADZ-Pad	3008-53	Osmose Wood Pres. Co.	
Altosid Briquet	2724-375-50809	Zoecon Corp.	Aquatic
Altosid Liquid	2724-392-50809	Zoecon Corp.	Aquatic
Altosid Liquid	2724-446-50809	Zoecon Corp.	Aquatic
Altosid Pellets	2724-448-50809	Zoecon Corp.	Aquatic
Altosid XR	2724-421-50809	Zoecon Corp.	Aquatic
Ambush	10182-18	Zeneca Inc.	
Ambush 25W	10182-35	Zeneca Inc.	
Ambush 25W	10182-110	Zeneca Inc.	
Amercoat 635	8120-49	Ameron Marine Coatings	
Amercoat 698HS	8120-48	Ameron Marine Coatings	
Aqua-Kleen	264-109	Rhone-Poulenc Agric. Div.	Aquatic
Aquashade	33068-1	Aquashade Company	Aquatic
Aquatate	1769-174	Certified Labs	Aquatic
Aquathol Granular	4581-201	Atochem N.A.	Aquatic
Aquathol K	4581-204	Atochem N.A.	Aquatic
Aquatic Weed Control	11547-31-40606	Bidall	Aquatic
Aquazine	100-437	Ciba-Geigy Corp.	Aquatic
Aquazine 90WDG	100-650	Ciba-Geigy Corp.	Aquatic
Arena	524-314-55765	Delfia Inc.	
Arena ME	524-344-55765	Delfia Inc.	
Asana	352-502	E.I. DuPont and Company	
Asana XL	352-575	E.I. DuPont and Company	
Astro T&O 25WP	279-3051	FMC Corp	
Astro T&O 3.2 EC	279-3014	FMC Corp	
Atratol 4LC	100-535	Ciba-Geigy Corp.	
Atratol 8P	100-475	Ciba-Geigy Corp.	

Appendix 9-1 (continued)

Product	USEPA No.	Company	Type*
Atritol 90	100-622	Ciba-Geigy Corp.	
Atrazine 4L	100-497	Ciba-Geigy Corp.	
Atrazine 4L	19713-11	Drexel Chemical Co.	
Atrazine 4L	352-490	E.I. DuPont and Company	
Atrazine 4L	34704-69	Platte Chemical Co.	
Atrazine 4L	9779-255	Riverside/Terra Corp.	
Atrazine 4L	5905-470-38167	Setre Chemical Co.	
Atrazine 80W	352-491	E.I. DuPont and Company	
Atrazine 90DF	35915-3-38167	Setre Chemical Co.	
Atrazine 90DF	35915-3-60063	Sostram Corp.	
Atrazine 90SD	35915-3-60063	Sostram Corp.	
Atrazine 90WDG	2749-485-34704	Platte Chemical Co.	
Atrazine 90WDG	34704-622	Platte Chemical Co.	
Atrazine DF	9779-253	Riverside/Terra Corp.	
Avitrol Corn Chops	11649-6	Avitrol Corp.	
Avitrol Corn Chops-99	11649-12	Avitrol Corp.	
Avitrol Dble. Whole Corn	11649-8	Avitrol Corp.	
Avitrol Double Strength	11649-5	Avitrol Corp.	
Avitrol Mixed Grains	11649-4	Avitrol Corp.	
Avitrol Powder Mix	11649-11	Avitrol Corp.	
Avitrol Whole Corn	11649-7	Avitrol Corp.	
Azinphos-M 2EC	46077-8-34704	Platte Chemical Co.	
Azinphos-M 50 PVA	10163-180	Gowan Co.	
Azinphos-M 50W	46077-7-34704	Platte Chemical Co.	
Azinphos-M 50WP	10163-78	Gowan Co.	
Azinphosmethyl 50W	51036-164	Micro-Flo Co.	
B-Nine	400-110	Uniroyal Chemical	
Banacide	1769-184	Mantek Div. of NCH Corp.	
Banrot 40W	58185-10	Grace-Sierra Crop Prot.	
Basamid Granular	7969-99	BASF Corp.	
Basamid Granular	2393-460	Waco Inc.	
Baygon 1.5 Emulsifiable	3125-214	Miles Agr. Div.	
Baygon 70% Wet. Powder	3125-146	Miles Agr. Div.	
Bicep	100-590	Ciba-Geigy Corp.	
Bicep 6L	100-645	Ciba-Geigy Corp.	
Bicep Lite	100-731	Ciba-Geigy Corp.	
Biflex TC	279-3112	FMC Corp	
Bladex 4L	352-470	E.I. DuPont and Company	
Bladex 80W	352-468	E.I. DuPont and Company	
Bladex 90DF	352-495	E.I. DuPont and Company	
Blue Ribbon Paraquat Plus	239-2186-39867	Agway Inc.	
Bonide Systemic Granules	4-153	Bonide Chemical Co.	
Bro-Mean C-2 PRE	5785-22-37733	Reddick Fumigants	
Bro-Mean C-0	5785-22-37733	Reddick Fumigants	
Brom-O-Gas	5785-4	Great Lakes Chem. Co.	
Brom-O-Gas	5785-42	Great Lakes Chem. Co.	
Brom-O-Gas	5785-55	Great Lakes Chem. Co.	
Bronate	264-438	Rhone-Poulenc Agric. Div.	
Bronco	524-341	Monsanto Co.	
Buctril	264-437	Rhone-Poulenc Agric. Div.	
Bullet Herbicide	524-418	Monsanto Co.	

Appendix 9-1 (continued)

Product	USEPA No.	Company	Type*
Calo-Clor	58185-1	Grace-Sierra Crop Prot.	
Calo-Gran	58185-4	Grace-Sierra Crop Prot.	
Carzol SP	45639-74	Nor-Am Agric. Prod. Inc.	
Catron II	7056-103-11770	Boehringer Ingelheim	Vet
Certamate	1769-165	Certified Labs	
Chap Fume	1022-562	Chapman Chemical Co.	
Chlor-O-Pic	5785-17	Great Lakes Chem Co.	
Chlorine	935-08	Occidental Chemical	
Chlorpyrifos 2E	51036-152	Micro-Flo Co.	
Chlorpyrifos 4E	51036-154	Micro-Flo Co.	
Chlorpyrifos 4E	34704-66	Platte Chemical Co.	
Cimacide	1769-234	National Chemsearch	Aquatic
Classic Yacht Clear	55363-5	ITW Philadelphia	
Co-Ral 25% WP	11556-21	Mobay Animal Health	
Co-Ral Emulsi. Livestock	11556-23	Mobay Animal Health	
Co-Ral Flowable	11556-98	Mobay Animal Health	
Coal Tar Creosote	61468-1	Koppers Industries	
Coal Tar Solution	218-136	Allied Corp.	
Commodore WP	10182-282	Zeneca Inc.	
Commodore WP WSP	10182-342	Zeneca Inc.	
Consyst	48234-3	Regal Chem. Co.	
Cop-R-Plastic	3008-55	Osmose Wood Pres. Co.	
Copper Sulfate	8590-405	Agway Inc.	Aquatic
Copper Sulfate	1109-19	Boliden Intertrade	Aquatic
Copper Sulfate	46923-4	Old Bridge Chemicals	Aquatic
Copper Sulfate	1278-8	Phelps Dodge	Aquatic
Copper Sulfate	1386-304	Universal Cooperatives	Aquatic
Counter 15-G Soil Insect.	241-238	American Cyanamid Company	
Counter 15G	241-238	American Cyanamid Company	
Counter 20CR	241-314	American Cyanamid Company	
Counter Lock & Load	241-238	American Cyanamid Company	
Creosote Coal Tar	363-14	Coopers Creek Chem	
Creosote Coal Tar 60/40	57344-5	Aristech Chemical Corp.	
Creosote Oil	218-609	Allied Corp.	
Creosote Oil	57344-1	Aristech Chemical Corp.	
Creosote-Coal Tar 60/40	61468-3	Koppers Industries	
Crusade 5G	10182-209	Zeneca Inc.	
CuSO <sub>4</sub> Crystals	1109-20	Boliden Intertrade	Aquatic
CuSO <sub>4</sub> Large Crystals	1109-1	Boliden Intertrade	Aquatic
CuSO <sub>4</sub> Powdered	1109-7	Boliden Intertrade	Aquatic
Cutrine Plus	8959-10	Allied Biochemists	Aquatic
Cutrine Plus Granular	8959-12	Allied Biochemists	Aquatic
Cycle Herbicide	100-476	Ciba-Geigy Corp.	
Cynoff 50WP	279-3108	FMC Corp	
Cynoff 50WSB	279-3117	FMC Corp	
Cynoff EC	279-3081	FMC Corp	
Cynoff WP	279-3070	FMC Corp	
Cynoff WSB	279-3085	FMC Corp	
Cyper Active 2.14EC	432-733	Roussel Bio Corp.	
D-Z-N 2.0 MEC	100-649	Ciba-Geigy Corp.	
DDVP 2E	5481-205-432	Roussel Bio Corp.	

**Appendix 9-1 (continued)**

<b>Product</b>	<b>USEPA No.</b>	<b>Company</b>	<b>Type*</b>
Del-Tox	59-128	Coopers Animal Health	
Demon 2E	10182-105	Zeneca Inc.	
Demon TC	10182-107	Zeneca Inc.	
Demon WP	10182-71	Zeneca Inc.	
Demon WP	10182-100	Zeneca Inc.	
Dermaton 3	59-203	Coopers Animal Health	
Des-I-Cate	4581-206	Atochem N.A.	
Di-Sect	1769-184-AA	National Chemsearch	
Di-Syston 15% Granular	3125-172	Miles Agr. Div.	
Di-Syston 8	3125-307	Miles Agr. Div.	
Di-Syston Gran.	7401-323	Voluntary Purch. Group	
Di-Tox-E	5602-97	Hub States	
Diazinon 14G	51036-70	Micro-Flo Co.	
Diazinon 4 E	100-463	Ciba-Geigy Corp.	
Diazinon 4 E	6720-191	Southern Mill Creek Prod.	
Diazinon 4E	51036-64	Micro-Flo Co.	
Diazinon 4E	10370-39	Roussel-UCLAF	
Diazinon 4E	10370-39-432	Roussel Bio Corp.	
Diazinon G-14	34704-230	Platte Chemical Co.	
Diazinon Insect Spray	100-463-7401	Voluntary Purch. Group	
Dibrom 14	59639-19	Valent USA Corp.	
Dibrom 8	59639-15	Valent USA Corp.	
Dichloron	1769-330	National Chemsearch	
Dimilin 25W	37100-8-400	Uniroyal Chemical	
Dimilin 4L	37100-54-400	Uniroyal Chemical	
Diquat Herbicide	62499-4-59639	Valent USA Corp.	
Diquat Herbicide	10182-353	Zeneca	
Ditrac Tracking Powder	12455-56	Bell Labs	
Dragnet FT	279-3062	FMC Corp	
Dri-Cide	1769-234	Mantek Kiv. of NCH Corp.	Aquatic
Dursban 2 EC	8590-394	Agway Inc.	
Dursban 2E	62719-65	Dowelanco	
Dursban 2E	6720-59	Southern Mill Creek Prod.	
Dursban 3E	6754-73	Dettelbach Pest Corp.	
Dursban 4E	8590-556	Agway Inc.	
Dursban 4E	62719-11	Dowelanco	
Dursban 4E	6720-206	Southern Mill Creek Prod.	
Dursban L.O.	62719-55	Dowelanco	
Dursban Plus	6720-203-1057	Rochester Midland	
Dursban TC Termiticide	62719-47	Dowelanco	
Dursban Turf Insect	62719-35	Dowelanco	
Dursban Turf Insect	62719-11	Dowelanco	
Dycarb	58185-18	Grace-Sierra Crop Prot.	
Dyfonate 10G	10182-180	Zeneca Inc.	
Dyfonate 4 EC	10182-212	Zeneca Inc.	
Dyfonate II 15G	10182-187	Zeneca Inc.	
Dyfonate II 20G	10182-135	Zeneca Inc.	
Edge	10182-195	Zeneca Inc.	
Empire 20	62719-88	Dowelanco	
Endosulfan	51036-92	Micro-Flo Co.	
Endothal Turf Herbicide	4581-79	Atochem N.A.	

## Appendix 9-1 (continued)

Product	USEPA No.	Company	Type*
Equity	62719-167	Dowelanco	
Estate	62719-166	Dowelanco	
Exotherm Termil	70-223	Rigo Co.	
Extrazine 4L	352-489	E.I. DuPont and Company	
Extrazine 90DF	352-500	E.I. DuPont and Company	
Extrazine II 4L	352-501	E.I. DuPont and Company	
Extrazine II DF	352-497	E.I. DuPont and Company	
Ficam Plus	45639-66	Nor-Am Agric. Prod. Inc.	
Ficam W	45639-1	Nor-Am Agric. Prod. Inc.	
Flee	279-3092	FMC Corp	
Fly Killer D	59639-18-2393	Haco Inc.	
Foamcoat Vaporooter	9993-2	Airrigation Engineering	
Fog-Sect	1769-197	Certified Labs	
Force 1.5 G	10182-130	Zeneca Inc.	
Formaldegén	6035-43	Vineland Labs	
Formaldehyde	6035-45	Vineland Labs	
Formula 268 Aqua Quat	1685-64	State Cheical Co.	Aquatic
Fulex DDVP Fumigator	1327-36	Fuler Systems Inc.	
Fulex Dithio Insect Smoke	1327-38	Fuler Systems Inc.	
Fulex Thiodan Smoke	1327-35	Fuler Systems Inc.	
Fumi-Cel & Fumi-Strip	40285-8	Degesch America	
Fumitoxin Bags	5857-6	Pestcon Systems	
Fumitoxin Pellets	5857-2	Pestcon Systems	
Fumitoxin Tablets	5857-1	Pestcon Systems	
Furudan 4 Flowable	279-2876	FMC Corp	
Furudan 4 Flowable	279-2876-3125	Miles Agr. Div.	
Garlon 3A	62719-37	Dowelanco	
Gastion Fum. Pell.	43743-2-1015	Bernardo Chemicals Ltd.	
Gastion Fum. Tab	43743-1-1015	Bernardo Chemicals Ltd.	
Gastoxin Fumi. Pellets	43743-2	Bernardo Chemicals Ltd.	
Gastoxin Fumi. Tablets	43743-1	Bernardo Chemicals Ltd.	
Gastoxin Sachets	43743-3	Bernardo Chemicals Ltd.	
Gramoxone Extra	10182-280	Zeneca Inc.	
Grandslam 75WP	3125-288-59807	Olympic Chemical Co.	
Guthion 2S Emulsifiable	3125-123	Miles Agr. Div.	
Guthion 3	3125-338	Miles Agr. Div.	
Guthion 35W	3125-378	Miles Agr. Div.	
Guthion 50 Solupak	3125-301	Miles Agr. Div.	
Guthion 50WP	3125-301	Miles Agr. Div.	
Guthion WSB	3125-379	Miles Agr. Div.	
Holdem Insect.-Nemat.	34704-710	Platte Chemical Co.	
Hollow Heart Conc.	3008-8	Osmose Wood Pres. co.	
Hydroblock	33068-1-10404	Lesco Inc.	Aquatic
Hydrothol 191	4581-174	Atochem N.A.	Aquatic
Hydrothol 191 Granular	4581-172	Atochem N.A.	Aquatic
I-SO-Sect	1769-165	National Chemsearch	
Inject A Cide	7946-11	Mauget, J.J. Co.	
Inject A Cide B	7946-10	Mauget, J.J. Co.	
Interswift A/F	2693-123	Courtaulds Coatings	
ISK Fume	1022-562-50534	Isk Biotech - Indus. Div.	
Isotracc Tracking Powder	3240-13-12455	Bell Labs	

Appendix 9-1 (continued)

Product	USEPA No.	Company	Type*
Judge	524-314-9779	Riverside/Terra Corp.	
K-Tea	1812-307	Griffin Corp	Aquatic
Kerb 50W	707-159	Rohm & Haas Co.	
Knock-Out	334-545-3635	Oxford Chemicals	
Komeen	1812-312	Griffin Corp	Aquatic
Laddock	7969-54	Basf Corp.	
Lannate L Methomyl	352-370	E.I. DuPont and Company	
Lannate LV	352-384	E.I. DuPont and Company	
Lannate Methomyl	352-342	E.I. DuPont and Company	
Lariat	524-329	Monsanto Co.	
Lasso & Atrazine	524-329	Monsanto Co.	
Lasso EC	524-314	Monsanto Co.	
Lasso MT	524-344	Monsanto Co.	
Lescoside Plus Algaecide	8959-12-10404	Lesco Inc.	Aquatic
Lindane SW & Ear Tick SP.	7056-103-11770	Boehringer Ingelheim	Vet
Maneb-Thiodan 4.5-3D	8590-164	Agway Inc.	
Marksman Herbicide	55947-39	Sandoz Crop Prot.	
MBC Soil Fumigant	8853-2	Hendrix & Dail Inc.	
MBC-33 Soil Fumigant	8853-3	Hendrix & Dail Inc.	
Mesuroil 50W Hopper Box	3125-309-39867	Agway Inc.	
Mesuroil 75W	3125-288	Miles Agr. Div.	
Metam-Sodium	5481-350	Amvac Chem. Corp.	
Metam-Sodium	52251-1-58167	Setre Chemical Co.	
Metasystox-R Ornamentals	3125-111	Miles Agr. Div.	
Metasystox-R SC	3125-111	Miles Agr. Div.	
Meth-O-Gas	5785-41	Great Lakes Chem Co.	
Meth-O-Gas 100	5785-11	Great Lakes Chem Co.	
Mevinphos 400	5481-114-34704	Platte Chemical Co.	
Milban	58185-12	Grace-Sierra Crop Prot.	
MITC-Fume	54289-2-3008	Osmose Wood Pres. Co.	
Mocap 10G	264-465	Rhone-Poulenc Agric. Div.	
Mocap 10G (Turf)	264-497	Rhone-Poulenc Agric. Div.	
Mocap 15G	264-457	Rhone-Poulenc Agric. Div.	
Mocap 5G	264-471	Rhone-Poulenc Agric. Div.	
Monitor 4 Liquid	3125-280	Miles Agr. Div.	
Monitor 4 Spray	59639-56	Valent USA Corp.	
Mosquito & Fly Control	10086-75-40606	Bidall	
Multi Purpose 70WP	4816-550	Roussel UCLAF	
Multi-Cide II	1769-137	Certified Labs	
Nemacur 10%	3125-237	Miles Agr. Div.	
Nemacur 15%	3125-236	Miles Agr. Div.	
Nemacur 3 EC	3125-283	Miles Agr. Div.	
Noxfish Fish Toxicant	432-172	Roussel Bio Corp.	Aquatic
Nusyn Noxfish	432-550	Roussel Bio Corp.	Aquatic
Oftanol 2 Insecticide	3125-342	Miles Agr. Div.	
Oftanol 5% Gran.	3125-330	Miles Agr. Div.	
Omite 30 W	400-82	Uniroyal Chemical	
Omite 30 WS	400-427	Uniroyal Chemical	
One-Sect	1769-233	Mantek Div of NCH Corp	
Option 1E	8340-23-54382	Hoechst-Roussel Agri-Vet	
Orchard Mouse Bait	8590-304	Agway Inc.	

Appendix 9-1 (continued)

Product	USEPA No.	Company	Type*
Orchard Mouse Bait	12455-17-8590	Agway Inc.	
Orchard Mouse Bait	4-152	Bonide Chemical Co.	
Orkinban 3E	6754-73-5802	Dettelbach Pest Corp	
Ornamite	400-82	Uniroyal Chemical	
Ornamite	400-426	Uniroyal Chemical	
Osmoplastic Wood Pres.	3008-56	Osmose Wood Pres. Co.	
Osmoplastic-D	3008-56	Osmose Wood Pres. Co.	
Oxamyl 10 G	904-415	Pratt Div. Miller Chem.	
Parathion 25W	5905-255-38167	Setre Chemical Co.	
Parathion 8E	5905-86-38167	Setre Chemical Co.	
Partner	524-403	Monsanto Co.	
Pathway	62719-31	Dowelanco	
Patox 11	3008-52	Osmose Wood Pres. Co.	
Pco Formula II	59639-31	Valent USA Corp.	
Pennacap-M	4581-292	Atochem N.A.	
Pennanone 31-66	4816-740	Roussel-UCLAF	
Phaser	8340-14-54382	Hoechst-Roussel Agri-Vet	
Phosdrin 4EC	5481-412	AMVAC Chem. Corp.	
Phosdrin 4EC	352-471	E.I. DuPont and Company	
Phosphamidon 8	10163-45	Gowan Co.	
Phosphamidon 8	34704-380	Platte Chemical Co.	
Phostek Fumi. Pellets	43743-2-1015	Bernardo Chemicals Ltd.	
Phostek Fumi. Tablets	43743-1-1015	Bernardo Chemicals Ltd.	
Phostek Sachets	43743-3-1015	Bernardo Chemicals Ltd.	
Phostoxin Tablets Prepac	40285-14	Degesch America	
Phostoxin Tablets-R	40285-1	Degesch America	
Pondmmaster AQ. Herbicide	524-308	Monsanto Co.	Aquatic
Pounce 1.5G	279-3059	FMC Corp	
Pounce 25 WP	279-3051	FMC Corp	
Pounce 3.2EC	279-3014	FMC Corp	
Pounce WSB	279-3083	FMC Corp	
Pramitol 25E	100-443	Ciba-Geigy Corp.	
Pramitol 25E	100-443-8590	Agway Inc.	
Pramitol 25E	100-443-34704	Platte Chemical Co.	
Pramitol 25E	100-443-38167	Setre Chemical Co.	
Pramitol 25E	100-443-9779	Riverside/Terra Corp	
Pramitol 5PS	100-479	Ciba-Geigy Corp.	
Pramitol 5PS	100-479-34704	Platte Chemical Co.	
Pramitol 5PS	100-474-9779	Riverside/Terra Corp.	
Pramitol 5PS	100-479-38167	Setre Chemical Co.	
Prentox Carbamate	655-638	Prentiss Inc.	
Prentox DDVP Five	655-536	Prentiss Inc.	
Prentox Diazinon 14G	655-730	Prentiss Inc.	
Prentox Diazinon 4 E	655-457	Prentiss Inc.	
Prentox Diazinon 4 S	655-462	Prentiss Inc.	
Prentox Diazinon 50W	655-456	Prentiss Inc.	
Prentox Dursban 2E	655-466	Prentiss Inc.	
Prentox Vaponn 2EC	655-491	Prentiss Inc.	
Prentox Vaponn 20% EC	655-492	Prentiss Inc.	
Prevail FT	279-3082	FMC Corp	
Professional Turf Insect	62719-35	Dowelanco	



Appendix 9-1 (continued)

Product	USEPA No.	Company	Type*
Propoxur 1.5 EC	4816-673	Roussel-UCLAF	
Proturf Insecticide 4	538-162	Scott, O.M. & Co.	
Prozine 70DF	241-302	American Cyanamid Company	
Pryfon 6	3125-339	Miles Agr. Div.	
PT 1325 Duraguard	499-367	Whitmire Research Labs	
PT 1700 Methiocarb	499-276	Whitmire Research Labs	
PTS Diazinon 4E	10370-39-54766	Pest Tech Systems	
Purge Total Release	9444-36	Waterbury Co.	
Purge With Vapona	9444-32	Waterbury Co.	
Purina Priority Dog Dip	602-309	Purina Mills Inc.	Vet
Purina Starlicide Com.	602-136	Purina Mills Inc.	Permit
Pydrin	352-485	E.I. DuPont and Company	
Pyrenone-Dursban	4816-537	Roussel-UCLAF	
Pyrinex 4	11678-46-279	FMC Corp	
Quick Kill	10088-13-55127	Tech Line Products	Aquatic
Quick Kill Insect. Conc.	655-783-7401	Voluntary Purch. Group	
Ravap EC	56493-42	Fermenta Animal Health	
Reward Aquatic Herbicide	10182-353	Zeneca Inc.	
Rid-A-Bird 1100	7579-2	Rid-A-Bird Inc.	
Ridall Zinc Track Powder	7173-197	Liphatech	
Rodeo	524-345	Monsanto Co.	Aquatic
Roo-Pru Tri Pak	64945-3	Conness Co.	
Rout	64898-4	Florida Petrochemicals	
Rozol Blue Track Powder	7173-172	Liphatech	
Rozol Tracking Powder	7173-113	Liphatech	
Safroten EC	2724-314-50809	Zoecon Corp.	
Safroten Roach Plus	2724-355-50809	Zoecon Corp.	
Saga WP	432-755	Roussel Bio Corp.	
Sanafoam Vaporooter II	9993-3	Airrigation Engineering	
Scimitar WP WSP	10182-360	Zeneca Inc.	
Scout	34147-2-54382	Hoechst-Roussel Agri-Vet	
Screw Worm & Ear Tick Kil	59-164	Coopers Animal Health	
See Boliden Intertrade		Tennessee Chemical Co.	
See Grace-Sierra		Sierra Chemical Co.	
See Roussel UCLAF		Ford's Chem. & Serv.	
See Roussel-UCLAF		Fairfield American Corp.	
See Valent USA		Chevron Chemical Co.	
See Waterbury Co.		Cline-Buckner	
Sharpshooterr	1769-233	Friendly Systems	
Simazine 4% Granules	72-289	Miller Chem. Fert. Corp.	
Simazine 4 L	19713-60	Drexel Chemical Co.	
Simazine 4 L	34704-687	Platte Chemical Co.	
Simazene 4 L	9779-296	Riverside/Terra Corp.	
Simazine 80W	19713-46	Drexel Chemical Co.	
Simazine 90DF	9779-295	Riverside/Terra Corp.	
Simazene 90WDG	34704-686	Platte Chemical Co.	
Sniper 2E	34704-691	Platte Chemical Co.	
Sniper 50	10163-180-34704	Platte Chemical Co.	
Sonar 5P	62719-123	Dowelanco	Aquatic
Sonar AS	62719-124	Dowelanco	Aquatic
Sonar SRP	62719-123	Dowelanco	Aquatic

Appendix 9-1 (continued)

Product	USEPA No.	Company	Type*
Stall MT	524-344-34704	Platte Chemical Co.	
Stem-AX	11769-167-AA	National Chemsearch	
Stem-Pro	11769-167	Mantek Div of NCH Corp	
Super Tin 4L	1812-244	Griffin Corp.	
Super Tin 80WP	1812-350	Griffin Corp.	
Supracide 2 E	100-501	Ciba-Geigy Corp.	
Sutazine +	10182-248	Zeneca Inc.	
Sutazine + 18-6 G	10182-201	Zeneca Inc.	
Systemic Gran.	7401-26	Voluntary Purch. Group	
Systosect	1769-167	Certified Labs	
Tandem	62719-82	Dowelanco	
Teknar HP-D	2724-365-50809	Zoecon Corp.	Aquatic
Teknar Larvicide	2724-316-50809	Zoecon Corp.	Aquatic
Telone C-17	62719-12	Dowelanco	
Telone II	62719-32	Dowelanco	
Temik 10 G Aldicarb	264-322	Rhone-Poulenc Agric. Div.	
Temik 15 G Aldicarb	264-330	Rhone-Poulenc Agric. Div.	
Tempo 2 Insecticide	3125-372	Miles Agr. Div.	
Tempo 20WP	3125-380	Miles Agr. Div.	
Tempo 20WP	3125-377	Miles Agr. Div.	
Tempo WSB	3125-396	Miles Agr. Div.	
Terr-O-Gas 67	5785-24	Great Lakes Chem Co.	
Terr-O-Gas 98	5785-22	Great Lakes Chem Co.	
Thimet 15G Soil	241-145	American Cyanamid Company	
Thimet 20-G	241-257	American Cyanamid Company	
Thimet Lock & Load	241-257	American Cyanamid Company	
Thiodan 3 D	8590-76	Agway Inc.	
Thiodan 3 E	8590-457	Agway Inc.	
Thiodan 3 EC	279-2924	FMC Corp	
Thiodan 50 W	8590-19	Agway Inc.	
Thiodan 50 WP	279-1380	FMC Corp	
Thiodan 50WP	279-1380-34704	Platte Chemical Co.	
Thiodan Garden Dust	7401-316	Voluntary Purch. Group	
Thiodan Insect Spray	16-141	Dragon Corp.	
Thiodan T&O 3 EC	279-2924	FMC Corp	
Thiodan T&O 50WP	279-1380	FMC Corp	
Thiodan Veg. & Orn. Dust	16-133	Dragon Corp.	
Thiogard 3	769-483	Security Prod. of Del	
Thionium Shampoo w/ Lindn	59-192	Coopers Animal Health	Vet
Timber fume	3008-39	Osmose Wood Pres. Co.	
Timberfume II	3008-46	Osmose Wood Pres. Co.	
Timberlife-D	3008-56	Osmose Wood Pres. Co.	
Tomato Potato Vegetable	279-1626-4	Bonide Chemical Co.	
Tordon 101	62719-5	Dowelanco	
Tordon 101R	62719-31	Dowelanco	
Tordon 22K	62719-6	Dowelanco	
Tordon K	62719-17	Dowelanco	
Tordon RTU	62719-31	Dowelanco	
Torpedo	10182-95	Zeneca Inc.	
Towerzine	1769-234	Certified Labs	Aquatic
Tree & Shrub Spray	8590-309	Agway Inc.	

**Appendix 9-1 (continued)**

<b>Product</b>	<b>USEPA No.</b>	<b>Company</b>	<b>Type*</b>
Tri Lux II T	5204-64-2693	Courtaulds Coatings	
Tribute	352-530-432	Roussel Bio Corp.	
Tribute	432-767	Roussel-UCLAF	
Triumph 4E	100-643	Ciba-Geigy Corp.	
Truban EC	58185-8	Grace-Sierra Crop Prot.	
Turbocide w/ DDVP	4816-687	Roussel-UCLAF	
Turcam	45639-59	Nor-Am Agric. Prod. Inc.	
Turcam 2.5	45639-100	Nor-Am Agric. Prod. Inc.	
Turcam 2.5G	34704-437	Platte Chemical Co.	
Turcam 2.5G	34704-437-54508	UAP	
Turcam 2.5G	34708-437-65783	United Horticult. Suppl.	
Turflon II	62719-75	Dowelanco	
ULD V-500 5% Vapona	11540-8	Micro-Gen Equip. Corp.	
Valent Herbicide H/A	59639-65	Valent USA Corp.	
Vapam	869-156	Green Light Co.	
Vapam	476-859-9779	Riverside/Terra Corp.	
Vapam Soil Fumigant	10182-150	Zeneca Inc.	
Vectobac 12AS	275-66	Abbott Labs	Aquatic
Vectobac 4G	275-74	Abbott Labs	Aquatic
Vectobac CG	275-70	Abbott Labs	Aquatic
Vectobac G	275-50	Abbott Labs	Aquatic
Vegetrol	1769-174	Mantek Div. of NCH Corp	
Vendex 4L	352-493	E.I. Dupont and Company	
Vendex 50WP	352-480	E.I. Dupont and Company	
Vikane	62719-4	Dowelanco	
Viktor	432-733-10370	Roussel-UCLAF	
Vina Chlor	1769-137-AA	National Chemsearch	
Vorlex Soil Fumigant	45639-90	Nor-Am Agric. Prod. Inc.	
VOS-BAN	1769-233	Certified Labs	
Vydate L Oxamyl	352-372	E.I. DuPont and Company	
Watrol	1769-174-AA	National Chemsearch	Aquatic
Weed RHAP A-4D	5905-501-38167	Setre Chemical Co.	Aquatic
Weedtrine D	8959-9	Applied Biochemists	Aquatic
Weedtrine II	228-61-8959	Applied Biochemists	Aquatic
Whip 1 EC	8340-23-54382	Hoechst-Roussel Agri-Vet	
Wid-Out	1769-137	Mantek Div of NCH Corp	Aquatic
Wood Fume	3008-33	Osmose Wood Pres. Co.	
Xtraban	6720-200	Southern Mill Creek Prod.	
Z.P. Rodent Bait AG	12455-17	Bell Labs	
Z.P. Tracking Powder	12455-16	Bell Labs	
Zep Stop	1270-199	Zep Manufacturing Co.	
Zinc Phosphide Mouse Bait	2393-185	Haco Inc.	
Zinc Phosphide Pellets	2393-521	Haco Inc.	

\* Explanation of type:

Aquatic = aquatic permit use

Vet = veterinarian use

Permit = special permit use

Blank = restricted use

## Appendix 9-2

### Connecticut Prohibited-Use Pesticides

(Source: 22a-66-2(a))

The following pesticides may not be registered and their use is prohibited:

1. Arsenic products except tricalcium arsenate for control of *Poa annua*, sodium arsenate for use in the treatment of lumber for protection against termites and decay-producing fungi, calcium acid methanearsonate (CMA), monosodium methanearsonate (MSMA), disodium methanearsonate (DSMA, MAA), ammonium methanearsonates, and cacodylic acid and its sodium salt
2. Benzene hexachloride (BHC)
3. Cadmium products
4. Dichloro diphenyl dichloroethane (DDD)
5. Dichloro diphenyl trichloroethane (DDT)
6. Dodecacholorooctahydro-1,3,4-metheno-1H-cyclobuta(cd)pentalene (Mirex)
7. Lead products
8. Mercury products except inorganic mercury products for control of winter turf disease on golf courses, provided that no mercury products will be applied to land which is either:
  - i. a. within 250 ft of high water of a potable water supply reservoir or 100 ft of all watercourses leading to a reservoir
  - b. within the areas along watercourses which are covered by any of the critical components of a stream belt
  - c. land with slopes 15 percent or greater without significant interception by wetlands, swales and natural depressions between the slopes and the watercourses
  - d. within 200 ft of groundwater wells
  - e. an identified direct recharge area or outcrop of aquifer now in use or available for future use
  - f. an area with shallow depth to bedrock, 20 in. or less, or poorly drained or very poorly drained soils as defined by the U.S. Soil Conservation Service that are contiguous to land described in subdivisions (cc) or (dd) and that extend to the top of the slope above the receiving watercourse
  - ii. land which is either:
    - a. on a public drinking supply watershed which is not included in subsection (i)
    - b. completely off a public drinking supply watershed and which is within 150 ft of a distribution reservoir or first-order stream tributary to a distribution reservoir
9. Phosphorous paste products

10. Selenium products
11. Terpene polychlorinates (65 or 66 percent chlorine) consisting of chlorinated camphene, pinene, and related polychlorinates (Strobane)
12. Thallium products
13. Toxaphene.

## **Appendix 9-3**

### **Connecticut Restricted-Use Pesticides**

(Source: 22a-66-2(b) and (c))

The following pesticides may be registered and used for the following purposes only:

1. Aldrin for use as a termite control
2. Dieldrin for use as a termite control
3. Lindane for leafminer, bark beetle, powder post beetle, or borer control, or for prescribed use on humans by a physician licensed by the State, or for prescribed use on animals by a veterinarian licensed by the State
4. Endrin for use as a mouse control in commercial orchards
5. Sodium flouride for use as a wood preservative
6. Strychnine for use as a rat and mouse control
7. Heptachlor to control subterranean termites when the method involves soil injection treatment or other soil incorporation method of application.

The following pesticides may not be registered or used for the following purposes:

1. Any pesticide activated by thermal means, except pyrethrum, pyrethrins, or pyrethroids, for indoor application, except indoor application for agricultural purposes
2. Captan on pets or other animals
3. Chlorodane products:
  - a. for indoor applications except by applicators licensed by the state
  - b. on pests or other animals except by veterinarians licensed by the state
  - c. for indoor or outdoor application by mistblowers and other mist generators or thermal foggers.



<b>INSTALLATION:</b>	<b>COMPLIANCE CATEGORY:</b> <b>FEDERAL INSECTICIDE, FUNGICIDE, AND</b> <b>RODENTICIDE ACT (FIFRA)</b> Connecticut Supplement	<b>DATE:</b>	<b>REVIEWER(S):</b>
<b>STATUS</b> NA   C   RMA	<b>REVIEWER COMMENTS:</b>		



**SECTION 10**

**NATIONAL HISTORIC PRESERVATION ACT (NHPA)  
AND CULTURAL RESOURCES**

**Connecticut Supplement**

**SECTION 10**  
**NATIONAL HISTORIC PRESERVATION ACT (NHPA)**  
**AND CULTURAL RESOURCES**  
**Connecticut Supplement**

**Definitions**

These definitions were obtained from the Connecticut General Statutes (CGS), Chapters 7-147 and 184a.

- *Archaeological Investigation* - any subsurface tests or excavation or other activity resulting in the disturbance or removal of artifacts or data from an archaeological site.
- *Historic Property* - any individual building, structure, object, or site that is significant in the history, architecture, archaeology, and culture of the state, its political subdivisions, or the nation and the real property used in connection therewith.



**NATIONAL HISTORIC PRESERVATION ACT (NHPA)  
AND CULTURAL RESOURCES**

**GUIDANCE FOR CONNECTICUT CHECKLIST USERS**

**Applicability:**

**Refer to  
Checklist Items:**

Historic Property

10-1

Archaeological Investigations

10-2 and 10-3



<b>COMPLIANCE CATEGORY:</b> <b>NATIONAL HISTORIC PRESERVATION ACT (NHPA) AND CULTURAL RESOURCES</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<b>HISTORIC PROPERTY</b>  <b>10-1.</b> Installations must meet specific requirements prior to any activity within the boundaries of an historic property (CGS Section 7-147s).  <b>ARCHAEOLOGICAL INVESTIGATIONS</b>  <b>10-2.</b> Installations must meet certain requirements for archaeological investigations (CGS, Section 184a).  <b>10-3.</b> Installations must meet specific requirements for the discovery and treatment of human burials (CGS, Section 10-388).	<p>Determine if the installation conducts any activities within the boundaries of a historic district or historic property.</p> <p>Verify that the installation obtains approval prior to any activity, erection of a building or structure, alteration of an exterior architectural feature, demolition, or removal of a building or structure within the boundaries of an historic property.</p> <p>Verify that no person conducts any archaeological investigation, initiates construction or demolition activities, or undertakes any other activity that would endanger the archaeological integrity or sacred importance of any area deemed as a state archaeological preserve.</p> <p>Verify that no person conducts an archaeological investigation on state lands without a permit from the Connecticut historical commission.</p> <p>Verify that the installation notifies the chief medical examiner and state archaeologist when any human burials or human skeletal remains are being or are about to be disturbed, destroyed, defaced, removed, or exposed.</p> <p>Verify that if human remains are encountered during any activity that may alter, destroy, or otherwise impair the integrity of such burials or remains, the activity is ceased and does not resume without authorization from the chief medical examiner and state archaeologist.</p>



<b>INSTALLATION:</b>	<b>COMPLIANCE CATEGORY:</b> <b>NATIONAL HISTORIC PRESERVATION ACT (NHPA)</b> <b>AND CULTURAL RESOURCES</b> Connecticut Supplement	<b>DATE:</b>	<b>REVIEWER(S):</b>
<b>STATUS</b> NA   C   RMA	<b>REVIEWER COMMENTS:</b>		



## **SECTION 11**

### **NATURAL RESOURCES MANAGEMENT**

#### **Connecticut Supplement**

# SECTION 11

## NATURAL RESOURCES MANAGEMENT

### Connecticut Supplement

#### COASTAL MARINAS

The regulation of coastal marinas is covered for the most part by the Federal *Clean Water Act* (CWA) and the *Coastal Zone Management Reauthorization Act*. To fulfill the requirements of these Acts, the Connecticut Department of Environmental Protection has developed a program to protect coastal waters from nonpoint sources of pollution. The resulting report, *Best Management Practices For Coastal Marinas* describes a variety of management practices that will reduce the release of pollutants from nonpoint sources from coastal marinas. While many of the practices are not currently mandated by state or Federal law, the implementation of such practices will generally help ensure compliance with current and future law. As a good management practice, all installations that conduct activities in coastal marinas should follow the practices included in the report for routine operations and maintenance.

#### Definitions

These definitions were obtained from the Connecticut General Statutes (CGS) Chapter 446, Sections 22a-342 through 22a-363, Chapter 97, Section 7-147a.

- *Commissioner* - the commissioner of the Connecticut Department of Environmental Protection.
- *Discharge* - emission of any water, substance, or material into wetlands or watercourses whether or not such substance causes pollution.
- *Diversion* - any activity that causes, allows, or results in the withdrawal from or the alteration, modification, or diminution of the volume of water that would occur at a given point at any moment. Examples of common diversions include withdrawal by gravity or pumping in excess of 50,000 gal of water in any 24 h period from any surface or groundwaters; construction, or alteration of dams, dikes, storm drainage, or flood control systems; alterations of waters including relocation, channelization, ditching, dredging, excavation, or filling.
- *Endangered Species* - any native species documented by biological research and inventory to be in danger of extirpation throughout all or a significant portion of its range within the state and to have no more than five occurrences in the state, and any species determined to be an endangered species by the Federal *Endangered Species Act*.
- *Extirpated* - to be extinct or not known to have occurred in Connecticut since 1980.
- *Threatened Species* - any native species documented by biological research and inventory to be likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range within the state and to have no more than nine occurrences in the state, and any species determined to be a threatened species by the Federal *Endangered Species Act*.
- *Wetland* - land, including submerged land, that consists of any of the soil types designated as poorly drained, very poorly drained, alluvial, and flood plain by the National Cooperative Soils Survey. Such areas may include filled, graded, or excavated sites that possess an aquic (saturated) soil moisture regime as defined by the U.S. Department of Agriculture (USDA) Cooperative Soil Survey.



**NATURAL RESOURCES MANAGEMENT**  
**GUIDANCE FOR CONNECTICUT CHECKLIST USERS**

**Applicability:**

**Refer to  
Checklist Items:**

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Endangered And Threatened Species    11-1

Coastal And Tidal Areas                11-2 and 11-3

Inland Water Resources                11-4

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COMPLIANCE CATEGORY: NATURAL RESOURCES MANAGEMENT Connecticut Supplement	
REGULATORY REQUIREMENTS:	REVIEWER CHECKS:
<p><b>ENDANGERED AND THREATENED SPECIES</b></p> <p><b>11-1.</b> Installations are required to protect threatened and endangered species (Connecticut Public Act No. 89-224 Section 9).</p>	<p>Determine if the installation has received an exemption from this requirement for activities that may affect endangered or threatened species from the Commissioner.</p> <p>Verify that the installation does not allow the taking, transport, possession, processing, import, export, buying, or selling of any wild animal or wild plant listed in Appendix 11-1.</p> <p>Verify that the installation does not destroy or adversely modify essential habitat so as to reduce the viability of the habitat to support endangered or threatened species or so as to kill, injure, or reduce the likelihood of species survival.</p>
<p><b>COASTAL AND TIDAL AREAS</b></p> <p><b>11-2.</b> Installations that conduct dredge or construction activities in tidal or coastal zones must have a permit (CGS, Section 22a-361 through 22a-383).</p> <p><b>11-3.</b> Installations must not allow the discharge of sewage from vessels in no-discharge zones (CGS, Section 15-171).</p>	<p>Determine if the installation dredges, erects any structure, places any fill, removes sand or gravel, obstructs or encroaches upon, or carries out any work in the tidal, coastal, or navigable waters of the state.</p> <p>Verify that the activities are conducted in accordance with a valid permit.</p> <p>(NOTE: Removal of sand and gravel for the purpose of maintaining existing channels, turning basins, vessel berths, mooring areas, and other waterfront facilities is allowed without a permit.)</p> <p>Verify that no person discharges sewage from any vessel within a no-discharge zone.</p>
<p><b>INLAND WATER RESOURCES</b></p> <p><b>11-4.</b> Installations must meet specific permit requirements for projects affecting inland lakes and streams (CGS, Section 22a-342 through 383).</p>	<p>Verify that the installation has a permit to conduct the following activities:</p> <ul style="list-style-type: none"> <li>- placing of any obstruction, encroachment, or hindrance within any stream channel encroachment line</li> <li>- maintaining a diversion of water from the waters of the state</li> <li>- constructs, alters, rebuilds, substantially repairs, adds to, replaces, or removes any dam or reservoir</li> </ul>

**COMPLIANCE CATEGORY:**  
**NATURAL RESOURCES MANAGEMENT**  
**Connecticut Supplement**

<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<b>11-4. (continued)</b>	<ul style="list-style-type: none"><li>- construction or placement of any structure within the tidal, coastal, or navigable waters of the state</li><li>- discharge into the waters of the state</li><li>- discharges of fill or dredged materials into wetlands or watercourses of the state</li><li>- removal or deposition of material; placement of any obstruction, construction, alteration or pollution of wetlands or watercourses</li><li>- erect, maintain, or operate a marina.</li></ul>

## Appendix 11-1

### Threatened and Endangered Wildlife (Connecticut Department of Environmental Protection, Section 26-306-4 through 26-306-6)

SCIENTIFIC NAME	COMMON NAME	STATUS*
<b>MAMMALS</b>		
<i>Cryptotis parva</i>	Least shrew	E
<b>BIRDS</b>		
<i>Ammodramus savannarum</i>	Grasshopper sparrow	E
<i>Asio otis</i>	Long-eared owl	E
<i>Bartramia longicauda</i>	Upland sandpiper	E
<i>Botaurus lentiginos</i>	American bittern	E
<i>Circus cyaneus</i>	Northern harrier	E
<i>Cistothorus platensis</i>	Sedge wren	E
<i>Falco peregrinus</i>	Peregrine falcon	E
<i>Haliaeetus leucocephalus</i>	Bald eagle	E
<i>Icteria virens</i>	Yellow-breasted chat	E
<i>Melanerpes erythrocephalus</i>	Red-headed woodpecker	E
<i>Podilymbus podiceps</i>	Pied-billed grebe	E
<i>Poocetes gramineus</i>	Vesper sparrow	E
<i>Sterna dougallii</i>	Roseate tern	E
<i>Accipter cooperi</i>	Cooper's hawk	T
<i>Accipter striatus</i>	Sharp-shinne hawk	T
<i>Asio flammeus</i>	Short-eared owl	T
<i>Casmerodius albus</i>	Great egret	T
<i>Catoptrophorus semipalmatus</i>	Willet	T
<i>Charadrius melodus</i>	Piping plover	T
<i>Egretta thula</i>	Snowy egret	T
<i>Eremophila alpestris</i>	Horned lark	T
<i>Gallinula chloropus</i>	Common moorhen	T
<i>Ixobrychus exilis</i>	Least bittern	T
<i>Laterallus jamaicenis</i>	Black rail	T
<i>Sterna antillarum</i>	Least tern	T
<i>Tyto alba</i>	Barn owl	T
<b>REPTILES</b>		
<i>Caretta caretta</i>	Loggerhead	T
<i>Chelonia mydas</i>	Atlantic green turtle	T
<i>Clemmys muhlenbergii</i>	Bog turtle	E
<i>Crotalus horridus</i>	Timber rattlesnake	E
<i>Dermochelys coriacea</i>	Leatherback	E



# Appendix 11-1 (continued)

<i>Eumeces fasciatus</i>	Five-lined skink	T
<i>Lepidochelys kempii</i>	Atlantic ridley turtle	E

## AMPHIBIANS

<i>Ambystoma laterale</i>	Blue-spotted salamander	T
<i>Gyrinophilus porphyriticus</i>	Northern spring salamander	T
<i>Plethodon glutinosus</i>	Northern slimy salamander	T
<i>Scaphiopus holbrookii</i>	Eastern spadefoot	E

## FISH

<i>Acipenser brevirostrum</i>	Shortnose sturgeon	E
<i>Acipenser oxyrinchus</i>	Atlantic sturgeon	T

## INVERTEBRATES

<i>Calephelis borealis</i>	Northern metalmark	E
<i>Alasmodonta heterodon</i>	Dwarf wedge mussel	E
<i>Anarta luteola</i>	Noctuid moth	E
<i>Cicindela puritana</i>	Puritan tiger beetle	E
<i>Dorocordulia liberia</i>	Racket-tailed emerald	E
<i>Elimia virginica</i>	Virginia river snail	E
<i>Erynnis persius persius</i>	Persius duskywing	E
<i>Leptodea ochracea</i>	Tidewater mucket	E
<i>Lycaena epixanthe</i>	Bog copper	T
<i>Grammia speciosa</i>	Bog tiger moth	E
<i>Hemileuca maia</i>	Buck moth	E
<i>Mitoura hesseli</i>	Hessel's hairstreak	E
<i>Hybomitra frosti</i>	Horse fly	T
<i>Hybomitra longiglossa</i>	Horse fly	E
<i>Papaipema appassionata</i>	Pitcher plant borer	T
<i>Phyllonorycter ledella</i>	Labrador tes tentiform	T
<i>Willamsonia lintneri</i>	Banded bog skimmer	E
<i>Zale curema</i>	Noctuid moth	T

## PLANTS

<i>Abies balsamea</i>	Balsam fir	E
<i>Agalinis acuta</i>	Sandplain gerardia	E
<i>Alopecurus aequalis</i>	Orange foxtail	T
<i>Amelanchier sanguinea</i>	Roundleaf shadbush	E
<i>Andromeda glaucophylla</i>	Bog rosemary	E
<i>Anemone canadensis</i>	Canada anemone	E
<i>Bouteloua curtipendula</i>	Side-oats grama-grass	E
<i>Arceuthobium pusillum</i>	Dwarf mistletoe	E
<i>Arenaria glabra</i>	Smooth mountain sandwort	T
<i>Arenaria macrophylla</i>	Large-leaved sandwort	E
<i>Arethusa bulbosa</i>	Arethusa	E

Appendix 11-1 (continued)

<i>Carex alata</i>	Broadwing sedge	E
<i>Aristida tuberculosa</i>	Beach needlegrass	T
<i>Aristolochia serpentaria</i>	Virginia snakeroot	T
<i>Asclepias variegata</i>	White milkweed	E
<i>Asplenium montanum</i>	Mountain spleenwort	T
<i>Carex buxbaumii</i>	Brown bog sedge	E
<i>Asplenium ruta-muraria</i>	Wallrue spleenwort	T
<i>Carex castanea</i>	Chestnut colored sedge	T
<i>Aster blakei</i>	Blake's aster	E
<i>Aster nemoralis</i>	Bog aster	T
<i>Carex crawei</i>	Crawe's sedge	E
<i>Aster radula</i>	Rough-leaved aster	E
<i>Aster spectabilis</i>	Showy aster	T
<i>Carex davisii</i>	Davis' sedge	E
<i>Carex formosa</i>	Handsome sedge	T
<i>Athyrium pycnocarpon</i>	Narrow-leaved glade fern	E
<i>Carex limosa</i>	Sedge	E
<i>Chamaelirium luteum</i>	Devil's-bit	E
<i>Cheilanthes lanigosa</i>	Hairy-lip fern	E
<i>Chrysopsis falcata</i>	Sickle-leaved golden aster	E
<i>Coelopleurum lucidum</i>	Sea-coast angelica	E
<i>Corallorhiza trifida</i>	Early coralroot	T
<i>Corydalis flavula</i>	Yellow corydalis	T
<i>Carex oligocarpa</i>	Eastern few-fruited sedge	E
<i>Cryptogramma stelleri</i>	Slender cliff-brake	E
<i>Carex polymorpha</i>	Variable sedge	E
<i>Carex prairea</i>	Prairie sedge	T
<i>Carex pseudo-cyperus</i>	Cyperus-like sedge	E
<i>Cypripedium reginae</i>	Showy lady's-slipper	E
<i>Carex schweinitzii</i>	Schweinitz's sedge	T
<i>Dalibarda repens</i>	Dew drop	E
<i>Desmodium humifusum</i>	Trailing tick-trefoil	E
<i>Carex viridula</i>	Little green sedge	E
<i>Dicentra canadensis</i>	Squirrel corn	T
<i>Dichanthelium scabriusculum</i>	Panic grass	E
<i>Castilleja coccinea</i>	Indian paintbrush	E
<i>Floerkea proserpinacoides</i>	Stiff mermaid-weed	E
<i>Gaultheria hispidula</i>	Creeping snowberry	T
<i>Diplachne maritima</i>	Saltpond grass	E
<i>Gaylussacia dumosa</i>	Dwarf huckleberry	T
<i>Drosera filiformis</i>	Thread-leaf sundew	E
<i>Gentiana quinquefolia</i>	Stiff gentian	E
<i>Dryopteris campyloptera</i>	Mountain wood-fern	E
<i>Dryopteris goldiana</i>	Goldie's fern	T
<i>Echinoderus tenellus</i>	Bur-head	E
<i>Eleocharis equisetoides</i>	Horse-tail spike rush	E
<i>Helianthemum propinquum</i>	Low frostweed	E
<i>Eleocharis quadrangulata</i>	Spike rush	E
<i>Heteranthera reniformis</i>	Kidneyleaf mud-plantain	E
<i>Houstonia longifolia</i>	Longleaf bluet	E
<i>Hudsonia ericoides</i>	Golden heather	E
<i>Hudsonia tomentosa</i>	False beach-heather	T
<i>Equisetum scirpoides</i>	Dwarf scouring rush	T

Appendix 11-1 (continued)

<i>Hydrastis canadensis</i>	Golden seal	E
<i>Eriophorum spissum</i>	Hare's tail	T
<i>Hypericum pyramidatum</i>	Great St. John's-wort	T
<i>Eupatorium album</i>	White thoroughwort	E
<i>Eupatorium aromaticum</i>	Small white snakeroot	E
<i>Ilex glabra</i>	Inkberry	T
<i>Isotria medeoloides</i>	Small whorled pogonia	E
<i>Lachnanthes carolina</i>	Carolina redroot	E
<i>Ledum groenlandicum</i>	Labrador tea	T
<i>Ligusticum scoticum</i>	Scotch lovage	E
<i>Liparis lilifolia</i>	Lily-leaved twayblade	E
<i>Lipocarpus micrantha</i>	Dwarf bulrush	E
<i>Ludwigia sphaerocarpa</i>	Globe-fruited False-loosestrife	E
<i>Malaxis brachypoda</i>	White adder's-mouth	E
<i>Malaxis unifolia</i>	Green adder's-mouth	E
<i>Moneses uniflora</i>	One-flower wintergreen	E
<i>Morus rubra</i>	Red mulberry	E
<i>Muhlenbergia capillaris</i>	Long-awn hairgrass	E
<i>Onosmodium virginianum</i>	Gravel weed	E
<i>Ophioglossum vulgatum</i>	Adder's-tongue	T
<i>Panicum amarum</i>	Panic grass	T
<i>Paspalum laeve</i>	Field paspalum	E
<i>Pellaea glabella</i>	Smooth cliff-brake	E
<i>Petasites frigidus</i>	Sweet coltsfoot	T
<i>Pinus resinosa</i>	Red pine	E
<i>Platanthera blephariglottis</i>	White-fringed orchid	E
<i>Platanthera ciliaris</i>	Yellow-fringed orchid	T
<i>Polygala nuttallii</i>	Nuttall's milkwort	E
<i>Polygala senega</i>	Seneca snakeroot	E
<i>Polymnia canadensis</i>	Small-flowered leafcup	E
<i>Populus heterophylla</i>	Swamp cottonwood	E
<i>Potamogeton hillii</i>	Hill's pondweed	E
<i>Potamogeton strictifolius</i>	Straight-leaved pondweed	E
<i>Potentilla tridentata</i>	Three-toothed cinquefoil	E
<i>Prunus maritima</i>	Grave's beach plum	E
<i>Psilocarya scirpoides</i>	Long-beaked bald rush	E
<i>Pycnanthemum clinopodioides</i>	Basil mountain-mint	E
<i>Pycnanthemum torrei</i>	Torrey mountain-mint	E
<i>Quercus macrocarpa</i>	Bur oak	E
<i>Ranunculus ambigens</i>	Water-plantain spearwort	E
<i>Ranunculus cymbalaria</i>	Seaside crowfoot	E
<i>Rhynchospora capillacea</i>	Capillary beak-rush	E
<i>Rhynchospora macrostachya</i>	Beaked rush	E
<i>Rotala ramosior</i>	Toothcup	E
<i>Salix exigua</i>	Sandbar willow	T
<i>Salix pedicellaris</i>	Bog willow	E
<i>Saururus cernuus</i>	Lizard's tail	E
<i>Scheuchzeria palustris</i>	Pod grass	E
<i>Scirpus acutus</i>	Hard-stemmed bulrush	T
<i>Scirpus torreyi</i>	Torrey bulrush	T
<i>Scleria reticularis</i>	Reticulated nutrush	E
<i>Scleria triglomerata</i>	Nutrush	E

Appendix 11-1 (continued)

<i>Scutellaria leonardii</i>	Small skullcap	E
<i>Smilacina trifolia</i>	Three-leaved Solomon's-seal	T
<i>Solidago ptarmicoides</i>	Prairie goldenrod	E
<i>Solidago rigida</i>	Stiff goldenrod	E
<i>Solidago rugosa</i>	Early wrinkle-leaved goldenrod	E
<i>Spergularia canadensis</i>	Canada sand-spurry	T
<i>Sporobolus cryptandrus</i>	Sand dropseed	E
<i>Sporobolus heterolepis</i>	Northern dropseed	E
<i>Stachys hyssopifolia</i>	Hyssop-leaf hedge-nettle	E
<i>Streptopus amplexifolius</i>	White mandarin	T
<i>Thuja occidentalis</i>	Northern white cedar	T
<i>Trollius laxus</i>	Spreading globe-flower	E
<i>Uvularia grandiflora</i>	Large-flowered bellwort	E
<i>Viola brittoniana</i>	Coast violet	E
<i>Viola canadensis</i>	Canada violet	T
<i>Waldsteinia fragarioides</i>	Barren strawberry	E
<i>Xyris montana</i>	Northern yellow-eyed grass	E
<i>Xyris smalliana</i>	Small's yellow-eyed grass	E
<i>Zizia aptera</i>	Golden alexanders	E

\* E = Endangered

T = Threatened



<b>INSTALLATION:</b>	<b>COMPLIANCE CATEGORY:</b> <b>NATURAL RESOURCES MANAGEMENT</b> Connecticut Supplement	<b>DATE:</b>	<b>REVIEWER(S):</b>
<b>STATUS</b> NA   C   RMA	<b>REVIEWER COMMENTS:</b>		

**SECTION 12**

**NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)**

**Connecticut Supplement**

**SECTION 12**  
**NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)**  
**Connecticut Supplement**

Regulations promulgated under the authority of NEPA are applicable to installations in Connecticut. State Agencies must develop Environmental Impact Evaluations for all major projects to which they contribute funds. Refer to Protocol Section 12 in the U.S. Environmental Compliance Assessment System (ECAS) Manual for Federal, Army, and DOD requirements.





<b>INSTALLATION:</b>	<b>COMPLIANCE CATEGORY:</b> <b>NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)</b> Connecticut Supplement	<b>DATE:</b>	<b>REVIEWER(S):</b>
<b>STATUS</b> NA   C   RMA	<b>REVIEWER COMMENTS:</b>		

**SECTION 13**

**ASBESTOS MANAGEMENT PROGRAM**

**Connecticut Supplement**

# **SECTION 13**

## **ASBESTOS MANAGEMENT PROGRAM**

### **Connecticut Supplement**

#### **Definitions**

The following definitions were taken from Regulations of Connecticut State Agencies 19a-332a, Standards for Asbestos Abatement and Licensure and Training Requirements for Persons Engaged in Asbestos Abatement.

- *Asbestos Abatement* - removal, encapsulation, enclosure, renovation, repair, demolition, or other distribution of asbestos-containing materials (ACM) except the removal or repair of asbestos cement pipe by a water company employee.
- *Asbestos Abatement Worker* - any employee of an asbestos contractor who engages in asbestos abatement.
- *Asbestos Abatement Site Supervisor* - any individual who is employed or engaged by an asbestos contractor to supervise an asbestos abatement project.
- *Asbestos Contractor* - any person or entity engaged in asbestos abatement whose employees perform asbestos abatement work.



**ASBESTOS ABATEMENT**  
**GUIDANCE FOR CONNECTICUT CHECKLIST USERS**

**Applicability: Refer to**  
**Checklist Items:**

Abatement      13-1

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**COMPLIANCE CATEGORY:**  
**ASBESTOS MANAGEMENT PROGRAM**  
**Connecticut Supplement**

<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<p><b>ABATEMENT</b></p> <p><b>13-1.</b> Any asbestos abatement projects and personnel must meet specific notification and licensing requirements (Regulations of Connecticut State Agencies 19a-332 and 19a-332a).</p>	<p>Verify that the installation has an asbestos abatement plan for any project that involves more than 10 linear ft or more than 25 ft<sup>2</sup> of asbestos-containing material approved by the Department of Health Services prior to asbestos abatement.</p> <p>Verify that the installation contacts the Department of Health Services prior to stating an emergency asbestos abatement project.</p> <p>Verify that asbestos contractors, site supervisors, and workers are licensed by the Department of Health Services.</p>





<b>INSTALLATION:</b>	<b>COMPLIANCE CATEGORY:</b> <b>ASBESTOS MANAGEMENT PROGRAM</b> Connecticut Supplement	<b>DATE:</b>	<b>REVIEWER(S):</b>
<b>STATUS</b> NA   C   RMA	<b>REVIEWER COMMENTS:</b>		

## **SECTION 14**

### **NOISE ABATEMENT**

#### **Connecticut Supplement**

# **SECTION 14**

## **NOISE ABATEMENT**

### **Connecticut Supplement**

According to the Connecticut Department of Transportation there are no state-wide regulations concerning airport noise control. Refer to the U.S. Environmental Compliance Assessment System (ECAS) manual.

#### **Definitions**

The following definitions are taken from the Department of Motor Vehicle Regulations of Connecticut, effective 27 December 1978.

- *Hard Site* - any site having the ground surface covered with concrete, asphalt, packed dirt, gravel, or similar acoustically reflective material.
- *Soft Site* - any site having the ground surface covered with grass, other ground cover, or similar acoustically absorptive material.



**NOISE ABATEMENT**  
**GUIDANCE FOR CONNECTICUT CHECKLIST USERS**

**Applicability:**

**Refer to  
Checklist Items:**

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Motor Vehicle Noise    14-1

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<b>COMPLIANCE CATEGORY:</b> <b>NOISE ABATEMENT</b> <b>Connecticut Supplement</b>	
<b>REGULATORY REQUIREMENTS:</b>	<b>REVIEWER CHECKS:</b>
<b>MOTOR VEHICLE NOISE</b>  <b>14-1.</b> Motor vehicle noise must meet specific requirements (Connecticut Regulations Concerning State Agencies 14.80a. 1a-5a).	<p>Verify that motor vehicle and snowmobile noise emissions, when measured with the sound measuring microphone located 50 ft from the target point, do not exceed the values in Appendix 14-1.</p> <p>(NOTE: The following operational noise does not have to follow the values shown in Appendix 14-1:</p> <ul style="list-style-type: none"> <li>- sound generated by a warning device</li> <li>- an emergency motor vehicle responding to an emergency call</li> <li>- a snow plow in operation</li> <li>- the sound generated by auxiliary equipment normally operated only when the vehicle is stopped or operating under 5 mph.)</li> </ul>





## Appendix 14-1

### Allowable Vehicle Noise Limits

(Regulations of Connecticut State Agencies, Section 14-80a)

Motor vehicles or combination having a Gross Vehicle Weight Rating (GVWR) of less than 10,000 lb including passenger motor vehicles:

	Manufactured Prior To 1 January 1979	Manufactured On Or After 1 January 1979
<b>Highway Operation</b>		
Soft Site - < 35 mph	76 dB(A)*	72 dB(A)
- > 35 mph	82 dB(A)	79 dB(A)
Hard Site - < 35 mph	78 dB(A)	74 dB(A)
- > 35 mph	84 dB(A)	81 dB(A)
<b>Stationary Operation</b>		
Soft Site -	76 dB(A)	78 dB(A)
Hard Site -	78 dB(A)	74 dB(A)

\*dB(A) - the standard abbreviation for "A" weighted sound level in decibels.

Motor vehicles or combination having a GVWR of 10,000 lb or greater:

<b>Highway Operation</b>	
Soft Site - < 35 mph	86 dB(A)
- > 35 mph	90 dB(A)
Hard Site - < 35 mph	88 dB(A)
- > 35 mph	92 dB(A)
<b>Stationary Operation</b>	
Soft Site -	86 dB(A)
Hard Site -	88 dB(A)

(continued)

**Appendix 14-1 (continued)**

Any bus having a GVWR of 10,000 lb or greater:

	<b>Manufactured Prior to 1 January 1979</b>	<b>Manufactured On Or After 1 January 1979</b>
<b>Highway Operation</b>		
Soft Site - < 35 mph	86 dB(A)	83 dB(A)
- > 35 mph	90 dB(A)	88 dB(A)
Hard Site - < 35 mph	88 dB(A)	86 dB(A)
- > 35 mph	92 dB(A)	90 dB(A)
<b>Stationary Operation</b>		
Soft Site -	86 dB(A)	83 dB(A)
Hard Site -	88 dB(A)	85 dB(A)

Any motorcycle:

	<b>Manufactured Prior To 1 January 1973</b>	<b>1 January 1973 to 1 January 1975</b>
<b>Highway Operation</b>		
Soft Site - < 35 mph	80 dB(A)	78 dB(A)
- > 35 mph	84 dB(A)	82 dB(A)
Hard Site - < 35 mph	82 dB(A)	80 dB(A)
- > 35 mph	86 dB(A)	84 dB(A)
<b>Stationary Operation</b>		
Soft Site -	80 dB(A)	78 dB(A)
Hard Site -	82 dB(A)	80 dB(A)

Snowmobiles:

	<b>Manufactured Prior To 1 January 1973</b>	<b>1 January 1973 To 1 January 1975</b>	<b>On &amp; After 1 January 1975</b>
<b>Operation any speed</b>			
Soft Site -	85 dB(A)	82 dB(A)	78 dB(A)
Hard Site -	87 dB(A)	84 dB(A)	80 dB(A)
<b>Stationary Operation</b>			
Soft Site -	86 dB(A)	83 dB(A)	79 dB(A)
Hard Site -	81 dB(A)	85 dB(A)	81 dB(A)

<b>INSTALLATION:</b>	<b>COMPLIANCE CATEGORY:</b> <b>NOISE ABATEMENT</b> Connecticut Supplement	<b>DATE:</b>	<b>REVIEWER(S):</b>
<b>STATUS</b> NA   C   RMA	<b>REVIEWER COMMENTS:</b>		

**SECTION 15**

**RADON PROGRAM**

**Connecticut Supplement**

**SECTION 15**  
**RADON ABATEMENT**  
**Connecticut Supplement**

Connecticut has no specific requirements concerning monitoring for radon in indoor facilities. When state regulations do not address an Army requirement, installations must comply with the requirements specified in the U.S. Environmental Compliance Assessment System (ECAS) Manual.



<b>INSTALLATION:</b>	<b>COMPLIANCE CATEGORY:</b> <b>RADON PROGRAM</b> Connecticut Supplement	<b>DATE:</b>	<b>REVIEWER(S):</b>
<b>STATUS</b> NA C RMA	<b>REVIEWER COMMENTS:</b>		



## **SECTION 16**

### **ENVIRONMENTAL PROGRAM MANAGEMENT (EPM)**

#### **Connecticut Supplement**

**SECTION 16**  
**ENVIRONMENTAL PROGRAM MANAGEMENT (EPM)**  
**Connecticut Supplement**

This protocol has no specific, applicable state regulations. Refer to the U.S. Environmental Compliance Assessment System (ECAS) Manual for Army requirements.



<b>INSTALLATION:</b>	<b>COMPLIANCE CATEGORY:</b> <b>ENVIRONMENTAL PROGRAM MANAGEMENT (EPM)</b> Connecticut Supplement	<b>DATE:</b>	<b>REVIEWER(S):</b>
<b>STATUS</b> NA   C   RMA	<b>REVIEWER COMMENTS:</b>		

## **SECTION 17**

### **HAZARDOUS MATERIALS MANAGEMENT**

#### **Connecticut Supplement**

**SECTION 17**  
**HAZARDOUS MATERIALS MANAGEMENT**  
**Connecticut Supplement**

The Division of State Police of the Connecticut Department of Public Safety and the Bureau of the State Fire Marshall regulate the storage and transportation of hazardous materials. The state has adopted by reference 49 CFR 107 Subpart B, 171 through 178, 388, and 390 through 397. Also, the following standards promulgated by the National Fire Protection Association (NFPA) are adopted by reference: Standard 30/1987 and 30A/1987 with Connecticut Supplement. In the event of any accident involving hazardous materials, it must be reported immediately to the Department of Environmental Protection (203-566-3338) or State Police Headquarters (1-800-842-0200). See the U.S. Environmental Compliance Assessment System (ECAS) Manual for DOD, ARMY, and Federal requirements.



<b>INSTALLATION:</b>	<b>COMPLIANCE CATEGORY:</b> <b>HAZARDOUS MATERIALS MANAGEMENT</b> Connecticut Supplement	<b>DATE:</b>	<b>REVIEWER(S):</b>
<b>STATUS</b> NA   C   RMA	<b>REVIEWER COMMENTS:</b>		